# The Purvis Oration

ON

# THE PRACTICE OF MEDICINE AND ORIGINAL RESEARCH.

*Delivered before the West Kent Medico-Chirurgical Society on Dec. 6th, 1901,*

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GENTLEMEN,—The years since 1834, when he first qualified whose long and honourable career this annual address is intended to commemorate and emphasise, are crowded with events in the progress of medicine. But it is not that thought that will be the burden of my theme to-night; it is rather this, how happy must he be, how rich must he feel, to whom it is given to be able to look back upon the wealth of experience that 67 years at least in the practice of medicine must have brought. And the one pity in it that I can see at the present moment is that Prior Purvis cannot deliver his own oration and unload himself for our benefit of his stores of knowledge. Would, indeed, that it were possible. How gladly should we listen to the richness of his knowledge.

> "But how shall letters and paper
> Imprison the breadth of Life?
> * * * * *
> Nay, how should a volume hold it,
> Inscribed with a human pen?"

And as this cannot be—for experience is largely incorporated with oneself and cannot be imparted—we must imagine what the story of his life would tell; and one thing we may be sure that would be revealed, would be the truth of the thought, that the practice of medicine all along is an original research. It is on that account that I have chosen it as the subject of my address, and I am the more impressed with its appropriateness because it was but the other day that the President of the British Medical Association, no doubt with that modesty that so much becomes a great position, delivered practical medicine bound hand and foot and cast it into the chamber of death. "Pondering," he says, "over medicine as it stands to-day the main fact that strikes me is how much more it owes to the biologists and the men of pure science than to the so-called practical men. The practical man is indispensable, but he is not, like the great biologists, a high priest of the Arcana of Nature." I to-night, in a position of greater freedom and less responsibility, am inclined to see in indispensability no more than the privilege I share in common with, say, the undertaker. But for the man of medicine I will certainly claim no less than that he is on an equality with the great biologists; and that all of us may be, all of us ought to be, some are, let us hope, these high priests of the Arcana of Nature I shall therefore contend to-night that we all may be, in our daily round of seeing and treating patients, in observing and combating disease, as truly scientific workers in advancing the progress of knowledge as those who are called the prosecutors of original research. "Scientific work" at the present day seems to me to be understood to apply only to research divorced altogether from the practice of medicine and carried on in the laboratory of the chemist and the physiologist. Now, while yielding to none in my desire to see "pure science," as it is called, and as I have defined it, better paid and therefore more generally practised than it is at present, I am not prepared to admit by silence that the man who spends laborious days and nights in his laboratory is the only really scientific worker or the only man who in the future is to be of any real use in the development of medical knowledge. On the contrary, I am prepared to maintain something nearly the very opposite of that—viz., that the practitioner is the man who very often plans the coach, and that the function of the worker in the laboratory is to drive in the bolts and to put on the varnish. In other words, those engaged in the practice of medicine have often been, possibly have always been, and certainly in the future may again be, the pioneers who by their observations suggest the lines that the workers in the laboratory take up and follow to their conclusion. They may not drive the nail home to an epoch-making discovery—for it is, indeed, one of the injustices of progress that only he who does so drive it home; who makes, as it is said, a discovery, acquires the credit—but they fill their niche in the world's economy and help discovery on.

No more use for the practical man? Is our use in the future to be no more than this—that we are to carry out the orders of the worker in the research laboratory? Surely the history of medicine points quite another moral. What about Bright and renal disease? It might well be wondered how far back in the century we still should be in relation to the malady that bears his name if Bright, the practical man, had not by his clinical observations and his observations in the post-mortem room pointed the clear way to future observation. Others may come after—the chemist, the physiologist, and so on—and point out further facts in the causation of the disease and differentiate from out of one now common group several varieties of distinct diseases, but Bright, the great clinical observer, showed them the way—he led them like Moses to Mount Pisgah, showed them the promised land, and said, Go forward and possess it. In the same way Wilks, who is really the father of all the careful work that has been done in England in the deadhouse, George Johnson, and other early pathologists, taught us more fully the distinctions between the various post-mortem changes. Others, for aught we know, may come after and drive home the further knowledge that this form of disease is due to a germ; perhaps that to some degenerative change; that to a pure inflammation, if there be such a thing. But the earlier observations have still pointed the way and set in process the thought and the line of investigation which eventuate in the final result. Then think of Jenner and Stewart—was there ever a better instance of a practical man than the late Sir William Jenner?—these two by their observations at the bedside and in the post-mortem room "discovered" the differences between typhus fever and typhoid fever, and it may well be maintained that they are the fathers of all that has been added to our knowledge since that day. And very interesting is it, to my mind, to think that typhus fever has practically disappeared from among us by the light of pure hygiene and common sense or ever the great biologists could get a finger in the pie. To find the germ of typhus fever now were but to find a missing link in the imperfect record of disease; unless, indeed, it be now only under the influence of the night. For of epidemics also is it true, "The night cometh in which no man can work."

It is much the same with malaria—a disease that has already disappeared from large tracts of country by the ordinary operation of hygienic laws. And it will be particularly interesting to watch what the bacteriologist will do now that his chance has come of attacking it from the inmost recesses of its origin. Take, again, the observations that have rendered the name of Addison imperishable is the annals of medicine. Addison was a great bedside teacher if ever there was one. He was a man of insight, of presence, and of speech, and by no means what one would now call a great biologist. He also, like Bright, captured a fortress far afield, from which even yet no great advances have been made although many patient workers are striving to open out new ground from his the original focus of discovery.

Another good illustration is to be found in vaccination, for who can doubt that for its usufruct one must count all the work that has been done of late upon the treatment of disease by animal extracts. The great biologists did not elaborate these out of their own heads. They had had the suggestion before them for years. Many a one must have seen the possibilities that this treatment of one of the specific fevers suggested in other directions, but the time was not yet ripe in other ways for what might seem dangerous experiments, and so the discovery, so far as it opened up lines of treatment other than that for the especial diseas , slumbered until Pasteur and Lister came along. Pasteur, by absorbing and regenerating the idea, opened it out and sent it along with all its possibilities in the treatment of microbic disease in general, and Lister helped largely to this end by showing how it could be carried out safely, and also with precision, which was necessary for the formation of reliable conclusions. From these two have come down in ever-increasing volume all the work that has been

done in pure cultures, attenuation of virus, toxins, and antitoxins, and so on, and although Pasteur was certainly one of the great biologists, Lister is the practical surgeon, and derived his chief inspiration, I imagine, from what he saw in the wards.

And at the risk of wearying you I would fain give one more illustration, and that shall be myxœdema. I take it that there is no disease that has given a greater stimulus to the treatment of disease in modern times than this, and what is its history? Sir William Gull first called attention to it as a cretinal state in the adult woman, a description that is strictly accurate. Dr. W. M. Ord worked at its chemistry and gave it the name of "myxœdema." Kocher, a German surgeon, found that in the removal of thyroids for disease his patients became myxœdematous. Mr. Victor Horsley produced the disease experimentally in monkeys by the same practice; and the records of necropsies showed that in those who died from the disease the thyroid body was in a state of atrophy; and Dr. George Murray and Dr. Hector Mackenzie suggested the remedy of introducing thyroid substance into the tissues and the food. A great body of work, and of the most far-reaching effect in all sorts of directions other than those of the one special disease, worked out almost entirely by practising physicians and surgeons from clinical observation.

Now let these few examples serve to show that, at any rate in the past, the man of practice has been the pioneer, and assuredly what has been in the past will be again. The man at the bedside and the worker in the laboratory have each their special work to do. And to my mind the function of practice is to throw light on functional and common ailments, to track disease behind its many feints; to be keen to see in the kaleidoscope of symptoms the one disease that determines all; the distinctions that exist between superficial resemblances; the affinities that link up together things that, maybe, are apparently diverse; to be able to keep the mind constantly on the look out for the straws that tell the direction of the wind, and thus be able to suggest associations to the undiscerning, or lines of profitable research to those who are ready and capable of taking them up. But to do this is often to go far ahead of your facts—it is, indeed, to cultivate the imaginative side of your intellect, and that is to expose yourself, maybe, to the finger of scorn of the so-called scientist. But there is no need to set to work upon a purely imaginative basis; a quick and receptive mental attitude has often ere now got an insight of the future, has set further work going to prove or to refute, and so has acted, so to speak, as the spermatic element in the infant Discovery. Imagination is not necessarily unscientific—it may be science on the edge of a precipice if you like—but carefully handled it is an indispensable link in the chain of research, and it is the link, I think, that you and I are most concerned to use. Many a man can catch and add an idea to the general stock who has neither the time nor the special skill necessary to carry a problem to its conclusion. And at the bedside I doubt if one can be too inductive in the contemplation of disease, the forces of nature are so inextricably interwoven. The delight of our calling is surely not in being a mere prescriber of drugs but in keeping a plastic and sensitive mind alert to note how little details in what we may even judge to be but trivial diseases fit in with, and bear upon, the larger questions of the grouping and the treatment of disease in general; to watch how function is modified here or there, how this or that drug acts in this or that case or individual, how this vital resistance plays you false and that assists you in your endeavour to unravel the true relation between supposed cause and effect, so that in all we may obtain a better knowledge of disease and a better hold on it with each case ended. This is the attitude that constitutes the scientific mind and which renders the practice of medicine a pleasure even amid its constant sorrow and care. The unscientific mind thinks only in terms of cure—I cured this with A and that with B; I did this and I did that. Methinks the humility of the "*Deus volens*," once so common and now almost lost, breathed a more scientific spirit, for it recognised the intervention of unknown values that might interfere with the soundness of our conclusions. And, oh, these hidden quantities! How stimulating they are and how perplexing and inscrutable they are likely to remain. And it is in these so-called trivial diseases, the common objects of the medical shore, that our danger comes of sinking into that complacency—that is, unto death. And yet in each and all of them how much there is that we do not know; how much that if we did know would not only illuminate themselves but many other kindred states.

Let us look for a moment or two at one or two of them. Take the first that comes before me as I think over the subject of this address. A man comes into my room and he tells me that he is so "slack." If I examine him perfunctorily and finding no disease give him a tonic and send him on his way I do all that is expected of me, and so far as *he* is concerned I may or may not do him any good, but I shall certainly have done myself harm, because there has been no true intelligence in the process and at most I have performed a sort of mental chuck-farthing. If, on the other hand, the complaint wakes up a responsive interest in the listener, how then? The mind sparks out into glimpses of many possibilities, the embers of a common complaint become vivid with life, and slackness then represents to you, perhaps, the effect of a thunderstorm, perhaps a father or a mother with the megrims, or the gout, perhaps a great anxiety, perhaps a fortune ill-gotten in the sense of having been too early sought and won, perhaps a kiln in which the draught induces waste, perchance the dampers keep production low, perhaps some early heralding of grave disease. And then to pass from further possibilities you turn to your other great function of relief or cure. Then one soon learns how completely inefficient are tonics to effect our purpose. And then, again, the mind goes out in questionings as to the nature of nerve force and its method of production, and one wonders whether perhaps, some day, electrical and nervous energy will approach each other more closely; and one longs for a jar of that magnetic vitality which one mind now and then unquestionably seems capable of infusing into another—an influence, it seems to me, that has of late become appreciably more real and conceivable since wireless telegraphy has come within the compass of investigation and experiment.

Let me next take swooning as one of the functional states that is well worth a study and yet one in which our ideas are very elementary, not to say too often erroneous. The common notion is undoubtedly that when a man faints the heart has gone wrong—a cause and effect that are seldom indeed coexistent. Swooning is *cerebral* and not cardiac and, as all here well know, it is often epileptic. But this also is but a bald and imperfect statement, for the condition is one that is interesting in the extreme, both as regards origin, affinities, and prevention. For the purpose of this address I have examined my notes of all the cases of swooning that have come under my notice—say in the last 16 years. There are 156 of them. I am sure I am correct in saying that most of them came because they took swooning to mean heart weakness, but only 10 of them had any cardiac trouble of any kind, and even of these in only three or four, if so many, could the heart, though at fault, have had anything to do with the faints. The list shows conclusively the nervous origin of swoons. It is now the overworked and anxious stockbroker who swoons, the neurotic woman, the sufferer from tinnitus aurium, from gouty vertigo, the patient with Ménière's disease, the epileptic, and now and again a case turns up that is rich with suggestion as to the cause of swooning. Here is one. A man, aged 54 years (and that reminds me that I had thought that swooning was an affection of women, but it is not so; in my cases the males slightly preponderate), had been very healthy till lately, but had taken to being very giddy, and one day, walking, he was taken with "a dreadful attack"; he became quite collapsed, and it was with difficulty that they got him into a shop—for he could not move—and gave him some brandy, and after a time his son, who was fortunately with him, got him home. I could find absolutely no disease, but he had a remarkably livid nose and ears, and his fingers were prone to die. And I cannot help thinking that his brain goes blue like his nose and ears, for I have notes of several similar cases—girls who swoon with remarkably blue hands and who have chilblains in cold weather; for example, a girl, 21 years of age, whose feet are always so cold that she requires a hot bottle in her bed. She has suffered from chilblains and of late she had had three or four faints. Here is another note of a woman, 31 years of age, who swoons. She has no headache or drowsiness. She sometimes vomits after insomnia. She has a good deal of close brain work and cold extremities always. I found no disease, but a peculiar erythromelalgic or Raynaud-like condition of the hands. I know of others who swoon from a violent cough. Now couple this experience, which I say is by no means uncommon, with the following observation by a medical friend upon his own person. I had been writing to him about a doubtful case of epilepsy and he writes back: "It will be useful if I give you my own personal experience.

As an overgrown boy of 19 or 20 I went to skate one very cold winter's day, left home, walked half a mile through the cold, and stood in the station waiting-room before a warm fire. The next thing I was conscious of was finding myself lying on a bench feeling awfully ill. I was told that I had suddenly fallen to the floor and almost knocked down a burly man in my fall. I have often since then experienced a tendency to swoon on coming out of the cold into the warm. My idea was that the sudden relaxation of the cutaneous vessels, previously strung up by the cold, was the cause of this fainting, the supply to the brain being for the moment switched off. Once or twice on such occasions I have found my left thumb twitching, and have had to beat a hasty retreat and keep a sharp grip upon myself. For treatment, in others, I trust more to valerian and valerianates than to bromide."

This case seems to me to be an unusually suggestive one, for no doubt the phenomena do seem to correspond to an occurrence such as is here suggested, and when we remember that what might seem to be very parallel occurrences are met with outside the body—where, though even here but poorly, they can be studied or, at any rate, observed—such as Raynaud's disease, erythromelalgia, dead fingers, and so on—it seems not unreasonable to suppose that we have a common group of diseases of the peripheral circulation which in the future we may be able to control by drugs. I would lay stress on this because this group has a close relationship to epilepsy, whereby its importance is considerably enhanced. For surely the great desideratum in this dread disease is a something that shall in a moment give the sufferer a greater grip over himself or still the rising storm. To avert an occasional explosion we now benumb the activity of the cerebral centres for long periods together, which cannot but be a harmful and wasteful procedure.

Closely related to this is another condition that strikes me as one that the practical man can advance by careful clinical observation—it is vertigo. You are frequently called upon to prescribe for giddiness, and in books you find it described as a symptom that is sometimes due to ocular and sometimes to aural disturbances, which does not seem to help one much. Giddiness, like swooning, is always a cerebral phenomenon. Sometimes it is a mild malady that owns some passing cause probably of toxic origin. In old people it is said to be chiefly gouty, and then it is never of much importance, although it often distresses its subject for fear that it may indicate commencing brain disease, a threatening of a stroke, and so on, which it hardly ever does. Sometimes it is a grave affection, associated then with the severer forms of migraine, with deafness and tinnitus. In most of these the room suddenly goes round, the ground seems to rise rapidly, till it seems to strike one in the face, and then the person falls. So suddenly do some of these attacks come on and pass off that it is hard to say what has happened—whether, indeed, there has been a temporary swoon or not. Some of these cases are, no doubt, closely akin to epilepsy, but their real nature is sometimes very puzzling. Not so long ago a lady was brought to me for an attack of which the following is a *résumé*. She was well past middle age; she had had a tumour removed from her breast, which was thought to be cancerous but proved not to be so. She was suddenly seized in the middle of the night with intense pain in the region of her heart and all the use in her legs went. The attack was over so quickly that she had not time to call. She had another attack while waiting in the street. Suddenly, without any pain this time, her legs gave way, and she slid down on to the pavement. She described herself as panting, shaking all over, everything falling from her hand, but she did not lose consciousness. It was impossible to be sure what was the nature of these attacks, but, on the whole, I inclined to their being cerebral and not cardiac. She returned to see me some five weeks later, having had no more attacks, but she still had a constant pain in her heart though noise worried her, and her head was "all of a whirl." The heart was excitable, but no more. After a few more weeks she had an undoubted epileptic fit, and I now hear that there are signs of a cerebral tumour. So that you see in the subject of grave giddiness a wide range of diseases is involved—at one end migraine and then in linked series come Ménière's disease, epilepsy, and cerebral tumour to arouse the interest and to keep the mind alert. Even in the milder forms that occur in old people and are called "gouty" there is this of interest—that you can never be sure whether remedies will cure in any given case, for vertigo is rather prone to hang about, to the worry of the sufferer and to the detriment of our reputation. It, like swooning, must, I think, be largely a matter of peripheral spasm; it also is a common object of the medical shore; the general practitioner is the one under whose ken it mostly comes; he has only to observe and to think about his many cases and he can hardly fail to add to our knowledge of the subject.

And having spoken of swooning and vertigo and taken the view of their nature that I have done, it is natural that I should pass on to other conditions of the peripheral circulation that you must see many of and therefore have some opinions about. And first in this regard let me say a word about the pulse. Think of all the pulses you have each of you felt; if each time you feel a pulse you do it with your full understanding, what an extensive experience is comprised within these four walls to-night and how much you must know about many moot conditions. But I have no doubt whatever that were this a discussion I could at once traverse one of the innate ideas of many by saying that I am no great believer in the *weak* pulse. I am often told by Mr. A or Mrs. B that he or she has such a very poor or weak pulse. And the implied suggestion that almost invariably is conveyed in that fact is that it is an indication of the impaired vigour of the heart that is behind it. And it seems reasonable enough. But think about it; and is it so? I will not say that he who sets store by a weak pulse and treats his patient upon the deductions that spring therefrom is altogether wrong; but I will say this, that for one case where a weak pulse is an indication of disease there will be a hundred in which it is no indication at all, and I think that I am more often right in saying, when anyone comes to me, and tells me that his medical attendant says he had such a weak pulse, "A very good thing for you! a weak pulse is an earnest of longevity, and you will not die from apoplexy"—save only that you must be sure about the weakness, for a weak pulse is sometimes a strong pulse—that is, a high tension pulse—but because it is a small pulse it is mistaken for a feeble pulse. Now I have thought over this matter over and over again, making the preliminary admission that I must be wrong in my opinion, for a weak or feeble pulse must be a valid indication of the condition of the heart. And yet the more I think of it the less can I see in the smallness of volume of a pulse any reliable indication of the vitality or nutrition of the heart. It *is* so sometimes, no doubt, but for my own guidance this sometimes has been chiefly in cases of acute illness, such as fevers, where in the course of the daily watching you have found the pulse alter and become soft or small and unsteady, an alteration that probably takes count of several details and not of the mere matter of feebleness.

When I look back upon all my experience of weak and feeble pulses, if I except the case of the very old and the dying where the extreme compressibility makes even observation difficult and goes with what is obviously extreme exhaustion—a condition that is certainly not so very uncommon—there is only one case that stands out in my memory as a pulse where I was sure that its weakness betokened a danger that was not otherwise discernible. And that case is instructive, for the patient was not yet old. He was sitting up in bed and in no distress. He was able to talk to us in a natural voice and with clear and vigorous intellect. His medical attendant had seen him in two or three attacks of sudden syncope when on merely moving out of bed he had gone grey and pulseless and appeared to be dying and I had seen him after one of these attacks when his pulse was so soft as to be hardly discernible and it was obviously sometimes better and sometimes worse within the few seconds of the examination. There was nothing very special about the heart—I do not think that there was any murmur—but we were convinced from his attacks and from the state of the pulse that there must be some very serious structural change in the muscular wall of the heart and we prognosticated accordingly. And so it fell out that there were three of us at the next day's consultation, and being interested in this question of weak pulses I endeavoured to extract from our senior what value he attached to this pulse from which I had drawn so grave a verdict, and I distinctly recollect being disappointed at his not taking much notice of it and drawing his conclusions (decidedly more favourable than we had come to) entirely from the state of the heart. I am sure of this, that if ever there was a pulse denoting a desperate state of the heart this was that case, and the patient died within 24 hours in

another of his attacks; and yet here was one of us paying little heed to the pulse, which clearly means that weakness for him had very little meaning. I hope, therefore, that no one listening to me to-night tells his patients that they have a weak pulse and a poor circulation, leaving them to imagine that their pump is wearing out—a conclusion that seems very reasonable and in 999 times out of 1000 very wrong. Thus I doubt if I should ever order a patient stimulants on the mere strength of a feeble pulse. I should need to take stock of many other points besides the mere one isolated symptom. Perhaps one would except certain pyrexial states, for in these one may suppose that one approximates nearest of any to dealing with the muscular power of the heart direct, for the pyretic state is liable to paralyse the subsidiary forces of the circulation and thus the peripheral current may become a reliable gauge of the condition of the heart. But possibly some may think that as I take so little stock of the feeble pulse as an indication of the state of the heart I must apply the same reasoning also to the strong pulse, and equally ignore the value of that. But I do not do anything of the kind, for I suppose that the peripheral control of the circulation as regards diminution is a much more direct one than its power of propulsion and, moreover, a strong heart may possibly overcome or modify the forces of the peripheral circulation, and so what I deny to the feeble pulse I allow to the strong pulse, for I think that it is a very valuable indication of the work that the heart is doing. And yet, as if to bear out my present contention that the pump and the conduits are in a large measure independent of each other, I have occasionally come across cases—I wonder whether anyone here has noticed the same fact—where the pulse has been a full hard pulse suggesting a labouring large heart, and when one turned to that organ one has found, as far as one could gauge it, that it was a poorly-acting and possibly feeble organ. Such cases are by no means common and they are not easy to explain, but I suppose that they are due to some capillary obstruction which, while inappreciable to the onlooker, is sufficient to overfill the vessels behind and perhaps to hamper the central organ. It is also possible that the heart, while giving no signs of enlargement or of labour, is yet involved in the one and the other, for it cannot be too often insisted upon at the present day that it is sometimes impossible to say if the heart be enlarged and that feeble sounds are hardly of more value than a feeble pulse. Take also that very interesting matter of persistently slow and quick pulses—a fit subject truly for an active-minded man. How little we know about them except the appalling fact that no remedies that are at hand will, for certain, make a quick heart go slow or a slow heart go quick. What a confession of incompetence, but it is the fact, digitalis and a few other drugs notwithstanding. Nay, what is more, we deliberately turn away from what little we might know and talk and act in flat contradiction to it. No fact, for example, is more certain than that the most common cause of a tachycardia is cerebral excitement, no fact is more certain than that a common cause of bradycardia is cerebral disease, and yet we talk of either as a disease of the heart, and attempt to control it by remedies that act upon the heart. Bradycardia may perhaps sometimes be dependent upon a dilated and diseased muscle, but I expect it is far more often due to some local disease or toxin in the bulb which we as yet know nothing about.

Passing from these to murmurs produced in the cardiac area, let me speak not so much about special murmurs as about the observation of murmurs. No class of cases is more common in general practice, and if we only sit ourselves down with a level head to observe these unnatural sounds you that have the chance of more or less continuous observation of cases over a long range of time may find it possible to add much to our knowledge. First, as regards their disappearance; it is generally and reasonably held that certain murmurs, the hæmic, for example, disappear: but there are plenty of these innocent—or non-valvular murmurs shall we call them?—that do not go, for all our treatment, and yet the patient is much the better in general health and maybe seems quite well. Next, as regards position, we are accustomed to think in terms of four valves with a very occasional interpolation of a congenital exception, and outside this our thoughts hardly ever roam. But if you observe for yourselves, without any undue subserviency to the opinions of those who have taught you, you must come to the conclusion that murmurs are by no means uncommon where the characteristic souffle is exactly like the murmurs that you are accustomed to think are caused by valvular disease of the common kinds and yet which you cannot quite fit in with any of them. It seems to me to be difficult to escape the conclusion that exocardial murmurs may simulate endocardial ones very closely and that they are much more common than most of us are inclined to admit. One other point I am inclined to insist upon is the variability of murmurs. I am not now alluding to the case where, the patient being seriously ill with heart disease, a murmur is sometimes present and sometimes absent—you all know of these cases and are accustomed to draw certain inferences therefrom as to the condition of the heart muscle,—I am alluding to a commoner and less noted variability where the murmur changes or disappears in the course of one examination and in response to some ordinary change of the position of body. Of the first class there is the common case of the nervous man or woman under examination where the heart is beating very rapidly and a loud murmur is heard with the first sound more or less in the position of the impulse. You listen on and the heart quiets down and the murmur quite disappears, to reappear, however, if anything again disturbs the heart in the course of the examination. The other group is where examining the patient standing you hear only the natural sounds of the heart; you put him recumbent on the sofa and the heart becomes cantering in its action with a more or less loud systolic murmur about the region of the impulse. Sometimes it is the other way about, but much less often so, where nothing is heard in the recumbent position and a murmur over the impulse when the patient is sitting or standing. Now I gather that there are those who think that a bruit heard under what may be called these partial conditions is nevertheless likely to mean some weakness of the muscle, and therefore to be, at any rate for the time, a real disease of the heart. I, on the contrary, should contend that murmurs that alter much in character, or come and go in accord with a change of the position of the body, are seldom of any importance. For my own part, I think that many of them must be produced outside the heart and in the lung adjacent to the impulse, and I think so because there is another very common systolic murmur that is often heard in women and in anyone who is not of the robustest type of physical development, which cannot, I think, be anything else from the characteristics that it shows. It is a systolic murmur like the others, and it is heard at the impulse and round into the axilla and even into the back sometimes. But its peculiarity is this, that it is heard in puffs only, two or three together, each puff quite distinct from the others, nearly always either at the end of inspiration or of expiration, and at other times the sounds are absolutely healthy. It certainly has no significance as regards the heart.

There are yet one or two other common conditions that may not inaptly be mentioned here in connexion with the group of circulatory disorders from which I have drawn my illustrations to-night. One of these is what I can only call puffiness. I am sure that it is a condition you are all familiar with, it is such a very common complaint. I daresay some might think that it is a symptom met with in hysterical women, but I think that opinion would be derived from the mood of complacency that I have already alluded to. I consider puffiness to be a real condition, although I am quite ready to admit—indeed, this is to me its real feature of distinction—that it is very difficult to substantiate this by our rough tests of pitting. I remember some years ago a woman who came to me several times complaining of this puffiness, and I could never make out that there was any real œdema. It was chiefly round about her eyes, but before very long it grew worse, and then there was no doubt that the case was one of myxœdema and it developed into a well-marked case. Naturally I have never forgotten that mistake, and whenever I hear of a woman complaining of puffiness, myxœdema is my first thought. But it is by no means always an indication of that disease. It is sometimes an indication of anæmia, and sometimes it is a curious state that is impossible to explain. Take the last case that I have in my remembrance. A woman who has lived a healthy life, and who has been healthy, slowly begins to lose her energy and to feel tired, and to get, as she expresses it, "so puffy" and so fat. Her eyelids are particularly noticeable, but it is not alone these, for her hands and feet feel stiff and uncomfortable. I examined her several times and I could not detect anything certain, but I *did* think that her complexion was a little pink and yellow, and that perhaps the lower

lids were a *little* puffy. I thought from her appearance that perhaps there might be some myxœdematous state behind it, and therefore put her on thyroid tabloids, but I cannot say with any striking result, although she expressed herself as better. I examined her urine, and found that it contained a little albumin—a mere trace. She got a little better but by no means well, so she was sent to a water cure, and there she lost all her feelings of fatigue, regained her walking powers, the albumin disappeared from her urine, and she came back quite well. So she continued for many months—till the other day, in fact—when back she came again on account of the same symptom, that she was again becoming puffy, "all over the body" as she expressed it. And again I failed to find anything that I could recognise as œdema, but again there is a return of a trace of albumin in the urine. And I have no doubt that her sensations are a true intelligence to her, that I cannot approach in delicacy. But what is this puffiness that she detects with such precision? I am inclined to think that it is some lymphatic or capillary difficulty, and that, owing to some fault in her juices, the parenchymatous processes of supply and absorption do not go on quite so readily as in health; and that this difficulty is recognised by the patient as a certain stiffness of the tissues. You have all, I doubt not, seen similar cases, for they are not by any means uncommon; and for myself I think that they are of considerable interest and well worth an attempt to unravel them when they occur. I once saw a little infant who suddenly became œdematous all over the body. There being no albumin in the urine, I turned to the diet to see if in that I could find any cause, and then I was told that for some reason or other, I forget now what, the child had been cut off all its milk and had been fed upon extraordinary quantities of broth.

And, mind you, it is out of the habit of closely observing common things that new diseases come. A new disease is always old, for even if, as I myself believe must be the case, diseases alter as their environment, this can only be a gradual process; new maladies do not jump into existence, and long ere they are discovered they have lain neglected or unrecognised before our faces. Cases of osteitis deformans, that curious enlargement with softening and curvature of the bones, identified now and for all time with Sir James Paget's name, were lying in our museums and records years before he signalised them, and out of Paget's description has, I doubt not, come a further interest in the bones and a fuller description, almost amounting to a like new discovery of acromegaly. Infantile scurvy, now associated with Sir Thomas Barlow's name, is to be found as an isolated case described by Sir Thomas Smith as "hæmorrhagic periostitis" at a much earlier date. Actinomycosis of to-day is surely the same disease described long ago by Dr. Vandyke Carter as "Madura foot." And who can doubt that when the time is ripe the same careful observation along the wayside of medicine will separate out other new diseases as that in the past has done? It is hardly wise to forecast the future in this respect, but it does not require much prescience to foretell that the field of pyrexial disorders is as yet by no means worked out, and for that reason I am glad to read of "the fourth disease" because it shows that a careful observer has his eye along this line and is attempting to re-open a but half-worked mine.

I do not think that we are enough alive to this search for new diseases. A good many of us are inclined to say "Fudge!" if such a thing is suggested, but the idea at any rate is a most energising one. I saw but the other day what was to me a new disease. It was in a large school in which both measles and influenza were rife and many children were down with each. In the course of these three boys at least, developed a markedly hectic fever with a deep coppery efflorescence of the skin which soon passed on into a condition of dermatitis not inaptly described as "crackling." But in addition to this there took place a sudden development of a fine capillary bronchitis that rendered the patients quite cyanotic and killed two children, one in less than 12 hours and the second in a somewhat longer time. In the third case recovery took place. I suppose it would be enough for most people to say in general terms that these children all suffered from an acute septic poisoning, and there let the matter rest, but I think that the cases become much more interesting if we let our minds roam over the supposition, not unlikely to be true, that we had here a new disease, and possibly a hybrid between influenza and measles. There is, at any rate, this much to be said in favour of this hypothesis, that there are few diseases that could be named that, if they could be made to breed together, would be likely to produce a more uncanny offspring, for both are of the worst possible febrile type. All *old* diseases, too, become of a sort new in their personal form, by reason of the individuality that they then put on, and I think that epidemics have many a curious and instructive tale to tell, if only we could read, of this production of sports and thus new diseases. But I suppose that, like sports, they most often show their inveterate tendency to reversion, and thus we are not heavily burdened with fresh ailments.

One other condition also will I mention, because it has, to my mind, the making of a new disease within it, and this is what has generally been introduced to me as "phlebitis," but I am by no means sure that all the cases which I have seen and which have been supposed to be of this nature are rightly included under one heading. The commonest form of the disease, and perhaps that to which there is the least exception to be taken, is where a man or a woman is suddenly taken with intense pain in one calf, some swelling that perhaps quickly subsides, and the complaint is said to be an attack of "gouty phlebitis." A case of this kind, taken as it stands, I should hardly be prepared to question, and very likely the name correctly conveys the nature of the malady, but such cases by no means always end up thus simply. It has several times happened in my experience that after being laid up for four or five weeks with a leg of this sort—the length of time being determined by the fear of the medical man that if the leg be allowed to droop or move a plug will be dislodged and pulmonary embolism result—suddenly there comes a similar attack in the other calf, and then another six weeks is required; and I have known the process to be repeated in other parts of the body and limb, and a period of months to be occupied in keeping the patient out of danger of embolism. In one of these cases the so-called vein process was accompanied by pain and swelling in some of the joints, and after being ill for many months the patient ultimately plumped out in her cellular tissues in such a way that she was supposed to have myxœdema. She was accordingly treated with thyroid extract but without much, if any, result, and when a committee of us sat upon her not long afterwards the body of opinion was against her having myxœdema, and I think no one was bold enough to give the disease a name. Another case I well remember, that also began in the calf of the leg, as I have described these others to do, and then other attacks followed in one and the other leg, but what was most remarkable was: that spread about, I think, both legs, but chiefly the right, in the course of the long saphena veins, there were large, hard, red, intensely painful, bubo-looking masses that I felt sure would require to be opened. I suggested that a surgeon should be called in for that purpose, but after giving a dreadful lot of pain for several weeks they all took their departure by natural effort. At the onset of this case I fell in with the routine diagnosis of phlebitis, but the subsequent course of events convinced me that it was of a different character and that it was in reality a lymphangitis. I am, indeed, now inclined to doubt whether there be such a disease as multiple phlebitis, and to think that we have a disease of the lymphatics that has not as yet received any adequate attention.

And then there comes the great question of the treatment of disease. It also falls well into line with all that I have said as regards cultivating a habit of minute observation, but I should make this one qualification—viz., that whereas I have contended that in suggesting to oneself possibilities as regards the causes and affinities of the processes of disease one can hardly be too imaginative, I should like to insist that one cannot be too reticent in the advocacy of remedies; it is hardly possible to be too critical in our judgment of an apparently favourable result. But with this damper on special enthusiasms how alive with interest becomes the most vulgar subject. Contrast the two systems of the treatment of disease—the scientific, shall we call it? and the penny-in-the-slot system in any common ailment—let us say constipation. By the one we set ourselves to determine as near as may be the cause of the malady, and that takes us over the man's whole life, his work, his exercise, his recreation, his nervous energy, his food, his very temperament and being, and one rises from the study a physician of larger mind and a more finished competency to treat disease. On the penny-in-the-slot plan we may hit out a success, but we do not reach the low level from which I started, for we are not

even indispensable, for the patent-pill man might have done as well or better.

Such, then, are some of the many subjects that might be selected to exemplify the constant need that there is of a never-relaxing scrutiny of the common aspects of practice. And in parting with my subject let me say that although practical medicine is essentially scientific both as regards its means and aims it is possible, alas, to degrade it to a trade. Not often this in the present day, when all men are so well educated and for the most part keen in their work. But we take it up with an obligation, and that is to prove all things as far as may be possible, and then to record our thoughts by means of such societies as this. I know that after a day of toil from very weariness of the flesh it is difficult indeed to put pen to paper, or even to have any thought at all, but I believe the main difficulty to be other than this—viz., that so many are unduly critical of the amount of their knowledge. Remember, then, what you are. Assert yourselves, and take your proper precedence by virtue of your right, as being men engaged all day long in contact with active disease. Speak up, and be assured that what you have to say is well worth listening to; there is far too prevalent a tendency to silence the individual judgment in face of the last new dictum of science, and thus it is that many a poor gem passes muster for lack of the polish that criticism would give, and which the mature experience of the practical man is so well able to afford.

## MODERN METHODS OF VACCINATION AND THEIR SCIENTIFIC BASIS.[1]

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I DESIRE in the first place to express my appreciation of the compliment you have paid me in asking me to open a discussion on modern methods of vaccination. The subject is one which cannot fail to be of special interest at the present moment, seeing that for the first time for a considerable number of years London is experiencing an epidemic of small-pox which, although thus far of insignificant extent relative to the total population, may not improbably, with the advent of winter, assume grave proportions unless energetic measures for its suppression are adopted. I desire to include under the title that has been chosen for the subject of discussion all methods that have tended to increase the amount and to improve the value and efficiency of vaccination, especially as carried out under official auspices at the present day—to include, therefore, all methods, experimental, legal, and administrative, which have been, and are being, employed with the objects that I have mentioned. But in order the better to appreciate the precise value of such modern methods it is necessary in the first instance to digress a little in order briefly to review, under these various headings, the history of vaccination from a period antecedent to the time when the operation first gained official recognition in this country.

As is, of course, well known, the introduction of vaccination dates from the publication in 1798 of Dr. Edward Jenner's historic pamphlet, the original draft of which had shortly before been rejected by the Royal Society. It is doubtless true that Dr. Jenner had been to some small extent anticipated by Jesty and others in the employment of the virus of cow-pox as a prophylactic against small-pox, but he it was who first realised the possibility of carrying on the disease through a series of human beings, by transferring the contents of the vaccine vesicles from arm to arm, and who by his strenuous advocacy of the methods introduced by himself first brought the matter prominently before the public. Early in the following year (1799) an extensive series of public vaccinations were initiated in London, mainly as the result of which Dr. Jenner was enabled to state in 1801 that "upwards of 6000 persons had been inoculated with the virus of cow-pox, and that the far greater part of them had since been inoculated with that of small-pox and exposed to its infection in every rational way that could be devised, but without effect." For this rapid extension of the practice of vaccination Dr. Jenner was not a little indebted to the activity and enthusiasm of Dr. Pearson of St. George's Hospital and Dr. Woodville of the Small-pox Hospital, who, when Dr. Jenner's stock of original lymph had come to an end and opportunity for replenishing it did not immediately offer, were enabled, as the result of their discoveries of outbreaks of cow-pox in various parts of London, to start independent series of vaccinations. In 1802 Dr. Jenner's discovery was brought to the notice of the Legislature, with the result that a committee of the House of Commons, after examining a number of witnesses eminent in the profession, issued a report entirely corroborative of Dr. Jenner's statements. In 1806, again, in consequence of an address to the King voted by the House of Commons, the Royal College of Physicians of London were instructed to inquire into the matter. Concerning the outcome of this inquiry, which extended over some nine months, it is stated in the Appendix to the Report of the Select Committee on Vaccination of 1871 that "the College of Physicians feel it their duty strongly to recommend the practice of vaccination. They have been led to this conclusion by no preconceived opinion but by the most unbiased judgment, formed from an irresistible weight of evidence that has been laid before them." Sir John Simon has placed it on record that in consequence of this report, which was presented to the House of Commons in July, 1807, "the public mind was apparently quite satisfied on the subject, and from this period begins to date the almost universal vaccination of children of the educated classes in this country."

In 1809 the so-called National Vaccine Establishment was founded, of which Dr. Jenner was first appointed Director, although he shortly after resigned the post. From this period onwards, in spite of a certain amount of opposition, the practice of vaccination became gradually more popular. But notwithstanding the fact that the value of the operation received ample recognition from Parliament, by whom its discoverer was substantially rewarded, it was not until the year 1840, in which the first Vaccination Act was passed, that the subject was dealt with by legislative enactment. By this Act, which was to some extent amended in the following year, every inhabitant of England and Wales was afforded the opportunity of obtaining vaccination at the public cost, although the question as to whether any person availed himself of its advantages or not was left entirely to his own option. Another important provision of this Act was that the operation of small-pox inoculation, which prior to the introduction of vaccination had obtained a considerable hold on the populace, was now prohibited, the transference of small-pox virus from one person to another being made a penal offence.

Not until 13 years later, in 1853, did vaccination become compulsory. The Act passed in this year made provision for the establishment of stations in each of the districts into which guardians and overseers were required to divide their unions and parishes in order to afford increased facilities for vaccination of the poorer classes. At these stations medical officers were to attend to perform the operation, and again for inspection of the result, and parents or others having charge of children failing to cause them to be vaccinated, or subsequently to vaccination omitting to have them taken for inspection, rendered themselves liable to a penalty. Certain further enactments, to which specific reference is unnecessary, came into force in 1858 and 1861. Six years later, in consequence of certain difficulties having arisen, more particularly in regard to the enforcement of penalties, a Bill to consolidate and amend the law relating to vaccination was brought before the House of Commons. This, after reference to select committees of both Houses, was passed and received the Royal assent on August 12th, 1867. Hardly, however, had it become law before strenuous opposition to its provisions was raised, Parliament being eventually petitioned to repeal it. Under these circumstances a Select Committee to which reference has already been made was appointed in the session of 1871 to inquire into the operation of the Act. As the result of careful consideration of the evidence brought before them the committee reported that in view of the great, though probably not absolute, protection afforded by vaccination against attacks of small-pox, together with the almost absolute protection against death from that disease, it was the duty of the State to endeavour to secure the careful vaccination of the whole community. They were further of opinion, however, that multiple penalties should not be imposed in the case of the

[1] A paper read before the Royal Medical and Chirurgical Society on Dec. 10th, 1901.

same child. These suggestions were embodied in a Bill which passed the House of Commons, and after amendment in the Upper House, involving some disagreement between the two legislative assemblies, became law in 1871. By this Act the Local Government Board was substituted for the Poor-law Board and the Lords of Her Majesty's Privy Council in the administration of the Vaccination Acts, and the powers of the Board were extended. Under the provisions of this Act and a further Act of 1874 the Local Government Board in October of the latter year issued an Order regulating the appointment, tenure of office, duties, and remuneration of vaccination officers and also the institution and conduct of proceedings by them. In February, 1887, an Order dealing with the duties of public vaccinators was issued by the Board, and in February of the following year (1888) yet another Order altered the age-limits at which revaccinations could be performed at the public expense.

Meanwhile, however, opposition to vaccination had been steadily increasing, and the administration of the Vaccination Acts became more and more difficult. Thus, although in the year 1872, the first year for which complete returns were made after the passing of the Act of 1871, the number of children in England and Wales whose vaccination was not finally accounted for amounted to but 5·1 per cent. of the total number of births, and the same percentage was unaccounted for in 1883, subsequent to this date the percentage of cases not fully accounted for mounted gradually higher and higher. It was under these circumstances that Mr. Ritchie, the then President of the Local Government Board, came to the conclusion that further investigation of the whole subject from every possible point of view was desirable, and accordingly, in May, 1899, a Royal Commission was appointed, consisting of 15 members, under the presidency of the late Lord Herschell. The terms of reference were as follows: to inquire and report as to (1) the effect of vaccination in reducing the prevalence of, and mortality from, small-pox; (2) what means, other than vaccination, can be used for diminishing the prevalence of small-pox and how far such means could be relied on in place of vaccination; (3) the objections made to vaccination on the ground of injurious effects alleged to result therefrom, and the nature and extent of any injurious effects which do, in fact, so result; (4) whether any, and if so what, means should be adopted for preventing or lessening the ill-effects, if any, resulting from vaccination, and whether, and if so by what means, vaccination with animal vaccine should be further facilitated as a part of public vaccination; and (5) whether any alterations should be made in the arrangements and proceedings for securing the performance of vaccination, and in particular in the provisions of the Vaccination Acts with respect to prosecutions for non-compliance with the law. After sittings extending over a period of six years the Royal Commission published their final report in August, 1896. Once again the value of vaccination as a protection from small-pox was re-affirmed, the actual amount of such protection being declared to depend on the efficiency and thoroughness of the operation and its repetition after an interval of from seven to 10 years. Injury following on the operation was declared to have been insignificant in the past, and under better precautions which should be adopted in the future was likely to disappear completely. Certain suggestions also were put forward as to the best means of popularising vaccination and as to alterations in regard to the infliction of penalties on defaulters and the affording of a loophole to the "conscientious objector."

Before the Royal Commission I had the honour of giving evidence, mainly in reference to the outcome of research work which I had been carrying on for several years previously. This work had dealt with methods of testing the potency of various kinds of lymph, whether of human or bovine origin, and its relative protective powers against the virus of small-pox, and more particularly with the question of the purification and preservation of vaccine lymph derived from the calf. Years before, the occurrence of certain fatal cases of erysipelas following on vaccination in the practice of the then public vaccinator at Norwich, concerning the origin of which an official inquiry was held at the time, had, boy though I then was, made a great impression on me. When commencing work on the subject of vaccination the remembrance of this unfortunate event caused me to turn my attention to the possibility of avoiding the accidental transference of erysipelas and other diseases from one child to another, in the operation of vaccination, by the substitution of some preparation of animal lymph for the arm-to-arm method of vaccination with human lymph which, prior to the passing of the Vaccination Act of 1898, was the only method officially recognised outside the metropolis. On making inquiry into the matter I found that there prevailed very commonly an idea that the use of crude calf lymph was undesirable, for the reason that it "took" more strongly than human lymph, that, in other words, more reaction and more generally "bad" arms were believed to be likely to result in persons vaccinated with lymph of bovine origin. In the course of a lengthy series of bacteriological inoculations of different culture media, from various samples of vaccine lymph, carried out originally in the hope of isolating the specific contagium of vaccinia I found that my culture tubes were apt to show abundant growth of micro-organisms which proved to be in no sense peculiar to vaccine lymph, consisting in part, indeed, of forms apparently identical with certain microbes commonly associated with suppurative processes. Moreover, a further point was noted that in plate cultures inoculated from specimens of fresh calf lymph the number of individual colonies which resulted was almost invariably much greater than in similar plate cultures, the nutrient medium of which had been inoculated with an equal quantity of fresh human lymph. And it appeared to me not improbable that this fact might have relation to the observed tendency of calf lymph to "take" strongly to which I have already referred, and might be due in turn to the greater difficulty in keeping clean the skin of the calf as compared with that of a child. The further fact was also noted that when vaccine lymph of either bovine or human origin was stored for any length of time in capillary glass tubes, the opacity which usually resulted after a longer or shorter period (an occurrence usually associated with deterioration of the efficiency of the lymph for purposes of vaccination) was caused, in large part at any rate, by an enormous multiplication of extraneous micro-organisms, which found in the serum of which the liquid portion of the lymph consisted a favourable medium for their continued growth and multiplication.

With the object of obtaining, if possible, inhibition of these extraneous micro-organisms without injuriously affecting the specific contagium of vaccinia, and thus providing myself with material of more hopeful nature for the purposes of my research, I carried out, some 12 years ago, a series of experiments which were first demonstrated to the International Congress of Hygiene in 1891 and subsequently to the Royal Commission. The results have since been set out fully in the Milroy Lectures for 1898. To these experiments, therefore, it is unnecessary for me on the present occasion to refer in detail. Suffice it to say that eventually the desired result was obtained by submitting the epithelial pulp of the vaccine vesicle, after careful trituration, to the continued action of a sterilised 50 per cent. watery solution of chemically pure glycerine for about four weeks, such treatment having the effect of at first inhibiting, and ultimately destroying altogether, the numerous extraneous micro-organisms originally present in the lymph material. Later it became apparent that such an emulsion, if preserved and stored under favourable circumstances, of which a low temperature and protection from light are of special importance, was usually capable of retaining its efficiency as vaccine unimpaired for considerable periods. Still further investigations proved that not only was it possible to kill off all the bacteria ordinarily to be found in crude lymph material, but also the streptococcus of erysipelas and the bacillus of tubercle, even when for experimental purposes these micro-organisms had been added in relatively huge quantities to the lymph-pulp prior to glycerination. Thus was gradually elaborated the method of ensuring the bacteriological purification of vaccine lymph to which the Royal Commissioners make reference in their final report, and which as the result of further investigations carried out at their suggestion on behalf of the Government has now been officially adopted in this country for the purposes of public vaccination.

In order to make adequate provision for the manufacture of glycerinated lymph on a sufficiently large scale it became necessary to revise and largely augment the arrangements previously in force under the auspices of the Government. Thus the Animal Vaccine Establishment in Lamb's Conduit-street, which had been founded in 1881 under the direction of the late Sir George Buchanan and Dr. Cory mainly for the performance of vaccinations direct from calf to arm, was entirely renovated in order to comply with modern aseptic requirements and provision was made for the accommodation

of a largely increased number of calves. Also additional premises were leased from the British (now the Jenner) Institute of Preventive Medicine and what are now known as the Government Lymph Laboratories were founded. My late official chief, Sir Richard Thorne, and I had previously, at the instance of the Government, made a tour of inspection of the principal vaccine establishments on the continent, more especially those under Government control in Germany, where we found that the methods devised by myself had already been adopted. As the outcome of the practical experience thus acquired, supplemented by the results of a somewhat similar, although less extended, series of visits made by Dr. F. R. Blaxall subsequently to his appointment as bacteriologist to the Department, the laboratories were equipped as far as possible with everything in the way of apparatus and accessories that appeared likely to prove useful in commencing operations on a large scale. Exactly how large that scale was to prove, however, we hardly realised at the time, and very considerable augmentation of the modest staff with which the work was commenced and large expenditure for the installation of additional instruments have been found necessary, in order to ensure the enormous demand for lymph being met as promptly and efficiently as is now invariably the case.

The methods employed by the Government[2] in the production, preparation, and storage of vaccine lymph and the work performed by the staff may briefly be described as follows.

1. *Vaccination of the calf.*—Calves of suitable age (from three to six months), breed, and condition are placed in a quarantine stable for a week. Their health being ascertained to be satisfactory they are transferred to the Animal Vaccine Establishment. Each calf on admission is examined as to its general health, is weighed, and its temperature taken, a record as to these points being kept. When required for vaccinating purposes the calf is strapped to a large tilting table, and the lower part of the abdomen, extending as far forward as the umbilicus and backwards into the flanks, is carefully shaved. This shaven area is first washed with a 5 per cent. solution of carbolic acid or lysol, then well syringed with tap-water, and finally cleansed with sterilised water. The moisture from such washing is removed from this shaven area, and from the adjacent skin, by means of sterilised gauze sponges. By these means it is found that this area of skin can be freed from micro-organisms, as evidenced by absence of growth on surface agar-agar or gelatin culture media inoculated with scrapings. The calf is then vaccinated with glycerinated calf-lymph introduced into the skin in numerous parallel linear incisions by a sharp scalpel, previously sterilised, which is dipped from time to time in the vaccinating fluid. The incisions are designed to penetrate the epidermis and to open up the rete malpighii, if possible without drawing blood, and as they are made additional glycerinated lymph is run in along the whole length by the aid of a sterilised blunt instrument, such as an ivory or bone spatula. The inoculation of the incisions is effected immediately they are made, otherwise the lips of the wound are apt to swell and to close the opening. After vaccination the calf is removed from the table and is then so stalled in a stable as to prevent any injury to the vaccinated surface. The temperature of this stable is not allowed to fall below 60° F.

2. *Collection of the vaccine material.*—After five days (120 hours) the calf is again placed on the table and the vaccinated surface is thoroughly washed with soap and warm water, gently rubbed over by the clean hands of the operator. It is again washed with tap-water and finally cleansed with sterilised water. Next, any crusts that may have formed upon the vesicular lines and any epidermal débris are removed by the careful use of a sterilised india-rubber pad. Superfluous moisture is absorbed by sterilised gauze sponges. At this stage the site of each incision should present a line of continuous vesiculation. The skin having been put firmly on the stretch the vesicles and their contents are collected with a sterilised Volkmann's spoon, each line being treated in turn and scraped once only, care being taken that the edge of the spoon does not touch the neighbouring line of vesicles. In this way the vesicular pulp is removed without admixture of blood. The pulp obtained by the above procedure is received into a previously sterilised stoppered bottle of known weight. The abraded skin-surface of the calf is gently washed with warm water and dusted over with starch powder or boric acid powder. The animal is then removed from the table and is weighed. Nearly all calves show a considerable gain in weight during their stay at the station and during the vaccination process. Each calf is then transferred to the slaughter-house attached to the Islington Cattle Market and is there slaughtered. A complete examination is made on behalf of the Board of the carcass and all the viscera by a veterinary surgeon especially appointed for the purpose. A report of this examination is received at the laboratories next morning. No lymph is used for any vaccination of the human subject until the animal in question is certified to have been healthy.

3. *Glycerination of the vaccine material.*—The bottle containing the lymph pulp from each calf is taken to the laboratories where the exact weight of the material is ascertained. The pulp is next transferred to a triturating machine, that employed being either one invented by Dr. Chalybäus of Dresden or a modified form of it. All the parts of the machine which come in contact with the lymph pulp are previously sterilised by prolonged steaming. The vaccine material, just as it is derived from the calf, is then passed through the machine, which is worked by an electric motor. When the pulp has been triturated in this way the amount of subdivision which it has undergone can be ascertained by suspending a loopful of the ground-up material in a watch-glass containing distilled water. If the trituration has been effectual such suspension should show only the minutest particles of pulp, causing the water to appear merely cloudy. The pulp is then passed through the machine a second time, together with six times its weight of a sterilised mixture of 50 per cent. of pure glycerine in distilled water. The resulting mixture is then once more passed through the machine, thus producing a fine and intimate emulsion. At this stage a loopful of the emulsion is withdrawn with a sterilised platinum needle and agar-agar plates are established in order to estimate both the number and the quality of the micro-organisms present in the lymph.

4. *Storage of the emulsion.*—The emulsion is next received into conical glass receptacles previously sterilised. By means of a stopcock at the apex of the cone the glycerinated lymph is run into small sterilised test-tubes capable of holding from four to 10 cubic centimetres. Each tube is filled as completely as possible, so that very little air remains in contact with the emulsion. It is plugged with a sterilised cork and sealed with melted paraffin which has been rendered aseptic with carbolic acid, and is then placed in a dark, cool cupboard or ice-chest. Week by week agar-agar plates are established from the emulsion with the result that the number of colonies is shown to diminish successively in the several plate cultures. At the end of a month the plates rarely show colonies of any sort.

5. *Use of the lymph at the Animal Vaccine Establishment prior to distribution.*—When the stage is reached at which agar plates show no growth after inoculation with the emulsion, samples of the lymph are drawn up into capillary tubes and despatched to the Animal Vaccine Establishment for the vaccination of children. The results of these vaccinations are recorded a week later, and from the number and size of the vesicles obtained an estimate is made as to the potency of the lymph.

6. *Transference of the glycerinated lymph to capillary tubes for distribution.*—When the lymph of a given calf has been shown to be satisfactory the bulk of it is transferred to sterilised capillary tubes by means of special tube-filling machines worked by water power. These tubes are next sealed in a small gas flame, every care being taken to prevent overheating of the lymph during the process. These sealed tubes are then stored in an ice-chest in boxes in such numbers that any quantity demanded up to some 6000 tubes per diem can be despatched at once to the National Vaccine Establishment at Whitehall, whence the lymph is distributed to public vaccinators.

7. *Recording the results of vaccinations by public vaccinators.*—Each public vaccinator receives in response to application made to the National Vaccine Establishment a consignment of lymph together with a schedule in which to record the results of its use, and these schedules, after having been examined at the National Vaccine Establishment, are sent to the laboratories. The schedules indicate the series number of the lymph, the date of its despatch from the National Vaccine Establishment, the name of the public vaccinator to whom it was supplied, the number of tubes sent, the dates when the several tubes were used, the

[2] Report of the Medical Officer to the Local Government Board, 1899.

number of persons vaccinated, the number of scarifications made, and the number of vesicles obtained. All these details are recorded at the laboratories, and from the last two items information as to the success which has resulted, both as regards individuals vaccinated and insertions of lymph made, is obtained and set forth, both in full and in the form of a percentage. In addition to these records a register is kept stating the particulars of the calves employed, the details of the lymph obtained from each calf, including the results of the bacteriological examinations, the results of the use of the lymph at the Animal Vaccine Establishment, and also the number of tubes of each series despatched to the National Vaccine Establishment.

During the first year of operations nearly 500,000 tubes of glycerinated lymph were sent out from the Government laboratories. Notwithstanding the difficulties that had naturally to be overcome in the inauguration of work of a character entirely new to practically all those engaged upon it, the success attending the use of the lymph at the hands of public vaccinators throughout the country was distinctly gratifying, the returns made by them to the National Vaccine Establishment showing that a case-success of 93 per cent. and an insertion-success of 83 per cent. had been attained. With a recent lymph series concerning which in the course of my work it became necessary to make special inquiry, and which had been distributed to 160 public vaccinators, the case-success and insertion-success were found to be 98 per cent. and 93 per cent. respectively. And at the present time it is by no means an unusual experience at the laboratories for returns showing complete case-success and insertion-success to be received.

Under the provisions of the Vaccination Act, 1898, which came into force in January, 1899, for a period of five years, and of the Vaccination Order (1898) of the Local Government Board, numerous changes in connexion with vaccination administration and with the performance of the operation were introduced in addition to the supercession of arm-to-arm vaccination by the use of glycerinated calf lymph. Thus whereas by the Vaccination Acts of 1867 and 1871 the parent or person having the custody of any child was required to procure its vaccination within three months of birth, this period by the Act of 1898 has been extended to six months. Again, no parent is now liable to a penalty under the compulsory clauses of the Vaccination Acts who affords proof that he has within four months of the birth of a child satisfied a stipendiary magistrate or two justices in petty sessions that he conscientiously believes that vaccination would be prejudicial to the health of the child. Moreover, in no case can proceedings now be taken more than twice against a defaulting parent—namely, once under Section 29 of the Act of 1867 and once under Section 31 of the same Act provided that the child had reached the age of four years. When first propounded the so-called "conscience clause" was received with a storm of opposition, more particularly on the part of the medical journals, but it is now, I think, generally admitted that the clause has justified its existence, since its operation has practically done away with "martyrdom" and so has weakened to no slight extent one of the principal weapons in the armoury of the anti-vaccinationists.

The operative procedure in public vaccinations was formerly based on the necessity of carrying on a weekly series of transferences of vaccine lymph from arm to arm, this method having been originally introduced as the best means then attainable of insuring the activity and comparative purity of the lymph. In large urban districts, therefore, vaccinations were performed week by week throughout the year, while in small towns and rural districts quarterly or half-yearly periods, each comprising several weeks, usually sufficed. In the latter cases material for starting the series was generally obtained by vaccinating one or more infants a week previously, and if fresh lymph for this purpose could not be obtained from a private case or through the good offices of a neighbouring practitioner a few doses of human or calf lymph stored in tubes or on points respectively were provided on application being made to the National Vaccine Establishment. Again, for the purposes of arm-to-arm vaccination the provision of stations, to which children were brought, first for the performance of the operation and again after a week's interval for inspection of the results, was an essential. The occasional hardships to the mothers and a somewhat remote possibility of danger to the children involved in being taken long journeys to a vaccination station in bad weather, or arising from the collecting together in one room of a number of children and adults, one or more of whom might happen to be suffering at the time from some infectious disorder, are a few of the reasons which appeared to render a change in this regulation desirable; as a matter of fact, it would appear that nothing but good has arisen from the substitution of domiciliary for stational vaccination, coupled, as it is, with the use of glycerinated calf lymph, "or such other lymph as may be issued by the Local Government Board." It may here be mentioned, however, since the fact appears to be comparatively unknown, that it is not essential for a public vaccinator to employ the lymph issued by the Government unless the parent or person in charge of the child exercises his right of insisting on its use. But the public vaccinator "must not employ lymph supplied by any person who does not keep an exact record of its source," and in any case he "must keep such record of the lymph he uses for vaccinating" as will enable him always to identify the origin of the lymph used in each operation. Further, the operator is enjoined never, when he has unsealed a tube of lymph, to attempt to keep any part of its contents for the purposes of vaccination on a future occasion. Moreover, he is required to use an artificial blower for the purpose of expelling the lymph instead of applying his mouth to the tube.

Two other sections of the "Instructions to Vaccinators under Contract" in the third schedule of the Vaccination Order of 1898 are of special importance. One of these refers to the aseptic precautions with which every stage of a vaccination should be carried out. "These should include (1) the cleansing of the surface of the skin before vaccination; (2) the use of sterilised instruments; and (3) the protection of the vaccinated surface against extraneous infection, both on the performance of the operation and on inspection of the results." The other section to which I would specially refer requires that whenever possible four separate, good-sized vesicles, or groups of vesicles, not less than half an inch from one another, must be produced, and that in any case the total area of vesiculation resulting from the vaccination should not be less than half a square inch. As regards the standard thus set up and insisted on in the case of those vaccinators whose work comes under periodical inspection at the hands of the Medical Inspectors of the Local Government Board, it may at once be admitted that there is no special magic in the particular number "four." But an area of half a square inch having been recognised in the report of the Royal Commission as probably the least extent of vesiculation absorption from which is capable of affording adequate protection to the individual against subsequent invasion by small-pox, the regulation requires that this area should be distributed over four insertions, mainly for the reason that experience has shown that less inflammatory reaction and less permanent destruction of skin tissue are likely to ensue than if the attempt be made to secure the same area by means of a less number of insertions of lymph.

This leads us to the consideration of what constitutes "efficient" vaccination. The answer may be summarised as follows: the clinical activity and bacteriological purity of the lymph employed for vaccination; the skilful performance of the operation itself; the making an adequate number of insertions of lymph over a sufficient area; the observance of precautions needful for ensuring strict asepsis, both at the time of vaccination and subsequently until the vaccination wounds are soundly healed,—all these are matters to be regarded as essential to "efficient vaccination." But, as has been well said by a writer in the *Edinburgh Review*, "even after efficient vaccination a slow progress away from safety and towards danger is inevitable and revaccination at least once after childhood is necessary if protection is to be maintained."

Much care has been exercised of late not only by the Government but also in many of the trade establishments, especially on the continent, in the preparation of the glycerinated calf lymph which in public and private work alike is now almost universally employed in this country. But this lymph, although under proper conditions usually capable of retaining its potency for many weeks or months, nevertheless under certain circumstances, at present imperfectly understood, is liable to become rapidly weakened and even eventually to become altogether inert. Possibly the condition of the calves from which the lymph is obtained, especially as regards their general health and the suppleness or the reverse of their skin, or exposure of the lymph to the action of light or to a high temperature are of special importance. Consequently in order to ensure the best results from its use it is not only

necessary that great care should be exercised in its manufacture, but it is also advisable that the lymph should be employed for vaccination as soon as possible after bacteriological examination has demonstrated its freedom from suppurative and other extraneous micro-organisms. We unfortunately at present possess no *test* of the efficiency of lymph other than the clinical one, and it is further of interest in this connexion that samples of lymph capable of affording fair results on the calf may fail to cause equal response when employed for vaccination of the human subject. It is therefore of importance that, as is invariably done in the case of the lymph issued from the Government laboratories, every batch should be tested on children before being distributed for general use.

As regards the carrying-out of the operation itself, it is somewhat unfortunate that there exists no official definition of what constitutes a "successful vaccination," and in consequence it is open to any practitioner to give a certificate of successful vaccination in cases where but one minute vesicle may have been produced. It is to be feared that such certificates are too frequently given, and it cannot be too strongly urged that vaccination of this sort involves incomplete protection. The standard laid down by the Local Government Board, to which reference has already been made, has for the most part proved easily attainable in practice, and it is much to be desired that in private as in public work the attainment of this standard should be aimed at in every instance. The suggestion has been made that in the form employed in certifying to the success of a vaccination the medical man performing the operation should be required to state the number of insertions of lymph made and the number of vesicles, or groups of vesicles, resulting therefrom. But it does not appear that the value of such a regulation would be very great in the absence of a further regulation requiring that all vaccinations, public and private alike, shall conform to a definite standard. The further suggestion has been made that every medical man should become a public vaccinator to the extent that he should have the right of claiming a fee from the public funds for every vaccination performed by him provided that he was willing that his work should be subject to inspection on behalf of the Government. But the originators of this idea can hardly have realised the magnitude of the inspectorial staff that would be required if such an arrangement were to be put in force.

The treatment of the arm at the time of vaccination and subsequently during the progress of the case is another subject which has aroused considerable controversy and concerning which much divergence of opinion would appear to exist. Thus in some quarters the initial cleansing of the arm is said to be objected to by the parents as a reflection on the care, or want of care, on their part as regards the condition of their children, but in general it is found that a little tactfulness in explaining the difference between ordinary and surgical cleanliness has sufficed to overcome the difficulty. In addition to this aspect of the case the friction employed in the process is of value in causing a slight capillary dilatation which undoubtedly contributes to the success of the operation. Water, soap-and-water, spirits of wine, or antiseptic solutions of greater or less potency containing boric or carbolic acids, lysol or perchloride of mercury, for instance, are employed by different operators for the purpose. Of these in all probability a warm solution of boric acid is the most generally useful, a stronger antiseptic such as corrosive sublimate, unless removed by the subsequent use of sterilised water or alcohol, being liable to exert a somewhat deleterious effect upon the lymph. The method to be employed at the operation and during the maturation of the vesicles for the protection of the vaccinated area from extraneous infection has not been defined by the regulations, for the reason that it appeared probable that each man would best attain the desired end by the same methods that he would ordinarily employ in the treatment of any other case of minor surgical injury. As was to be expected, therefore, the means adopted for the protection of the vaccination wounds have been very various and different trade firms have undoubtedly reaped an extensive harvest by the introduction and energetic advertisement of special dressings of one and another kind. In Paris, at the time of my official visit, a semi-transparent material known as "*taffetas Marinier*," not unlike thin isinglass plaster, and which adheres to the skin when moistened with water, was, I found, invariably employed to protect the vaccinated area during the first few days following the operation, and a somewhat similar substance advertised by an English firm is, I believe, at present utilised to a considerable extent in this country. But during the second week of the process it is essential that some dressing of an absorbent nature should be employed, as it is during this period that oozing from the vesicles occasionally supervenes. The means employed for retaining the dressings in position are almost as numerous as the latter themselves. At the Government station in Lamb's Conduit-street a dressing composed of a couple of layers of boric lint, kept in place by means of pieces of rubber strapping which do not entirely encircle the arm, is applied at the time of vaccination and this is replaced by another exactly similar dressing when, a week later, the case returns for inspection of the result. But whatever be the nature of the dressing the free use beneath it of a dusting powder of boric acid has a most beneficial effect in preventing any undue amount of inflammatory reaction.

Concerning the nature of the instrument best adopted for the purpose of vaccination I desire to offer a few remarks. Here again each operator will probably attain the greatest measure of success with that instrument to the use of which he has been accustomed. But, speaking generally, the less complicated it is the better. Again, it is desirable that it should be formed entirely of steel so that it may be readily sterilised by boiling or by heating to redness in the flame of a spirit lamp, the first method being preferable as not tending to injure the temper of the metal. Possibly the best and certainly the simplest form of instrument is the ordinary triangular-headed surgical needle, which possesses the advantage that on account of its small cost a fresh one, if thought necessary, can be employed for every operation. It is curious to find, on turning to the old literature of small-pox inoculation, how all the processes of vaccination were originally copied from those which the inoculators had gradually elaborated. It was of course to these practitioners that Dr. Jenner was indebted for the model on which he framed his method of arm-to-arm vaccination, and in connexion with my choice of an instrument I was specially interested to find that Dr. Emanuel Timoni in a paper on the practice of inoculation among the Turks, presented to the Royal Society in 1716 by Dr. Woodward, makes the following statement: "These punctures ..... succeed best in the muscles of the arm. ..... The needle is to be a three-edged surgeon's needle; it may likewise be performed with a lancet."

The manner of operating which affords the most generally successful results consists in blowing out the lymph from the capillary tube in which it is stored on to the surface of the skin at different points, the number and situation of which must correspond with those of the vesicles which it is desired to obtain. The skin, put slightly on the stretch, is then gently scarified, *through each droplet of lymph*, with the needle or other instrument, first in one direction and then in another, more or less at right angles to the first, the drawing of blood being avoided as far as possible. In this way the corium or superficial layer of the skin is thoroughly opened up and in some measure removed and thus the emulsion is brought into intimate relation with the cells of the true skin beneath. Operating in this fashion and employing lymph of normal potency, it is quite easy to obtain an area of vesiculation satisfying official requirements. Many operators, I find, reverse the procedure somewhat, first making their scarification and then rubbing on the lymph. But whether it be that some of the minute scratches are thus closed up as the lymph is applied, or whatever else the reason, certain it is that the results obtained are usually by no means comparable with those following on the method of scarification *through* the beads of lymph previously dropped upon the skin.

The operation having been completed, it is well to avoid too great haste in applying the protective dressing, especially if this be of the nature of an absorbent pad or if it be impregnated with some powerful germicide, as in the case of sal-alembroth wool. Some little time necessarily elapses before complete absorption of the vaccine emulsion and the exuded lymph has taken place, and to insure the best results a little exercise of patience is essential. With the object of hastening this period of drying I some time ago devised a method of removing the glycerine from the lymph emulsion after such time as bacteriological tests showed that it had fulfilled its purpose of destroying extraneous micro-organisms,

and replacing it with an equal amount of an inert fluid of similar specific gravity. But the more rapid drying of the vaccinated area thus obtained appeared hardly to compensate for the extra trouble involved in the special preparation of the lymph.

When every care has been taken to protect the arm during the progress of the vaccination and to prevent the premature detachment of the crusts the amount of permanent scarring of the skin which remains may be astonishingly slight. This is, I think, one of the results of modern methods of vaccination to which as yet attention has hardly been sufficiently directed, although in the future it is likely to prove a matter of considerable importance. There can be little doubt but that the huge and deep scars which not infrequently resulted from the vaccinations of former years were due to some extent to excessive destruction of skin tissue by micro-organisms other than that specific to vaccinia. If this be so, then it becomes apparent that persistence of such large and deep scars, practically throughout life, does not necessarily afford evidence that any equivalent degree of immunity against the infection of small-pox is enjoyed by their possessor. To this fact attention has been called in a recent communication to the *British Medical Journal*, although the writer propounds a somewhat different interpretation of the facts which he has observed.

The question naturally arises as to whether appreciable advantage to the community can be proved to have resulted from the adoption of our more modern methods of vaccination. It is for several reasons somewhat difficult to give as yet any very definite answer, although such statistics as are at present available are decidedly encouraging. There can be no doubt that the operation of the most recent Vaccination Act has been accompanied by a very considerable increase in the number of vaccinations performed, although it should be borne in mind that this increase is, in some degree at any rate, to be accounted for by the vaccination of cases previously in default, a source from which it is unlikely that the figures can be continuously augmented. None the less, however, it is matter for satisfaction that the vaccination of these outstanding cases should have been secured. From a return presented to the House of Commons on August 6th, 1900, which is the latest available source of information, we learn that in the year 1899, the first during which the Act of 1898 was in force, the number of certificates of successful primary vaccinations received showed an increase of 169,035, or no less than 33·8 per cent. over the figures for the previous year, the totals for the two years being 500,314 in 1898 and 669,349 in 1899 respectively.

But there is another source from which we may learn something as to the value of modern methods of vaccination. I refer to the annual reports of the Registrar-General under the heading, "Deaths attributed to Cow-pox and other Effects of Vaccination." For a series of years deaths thus registered averaged one every week for the whole of England and Wales, but whereas in 1889 and 1892 the actual number of deaths included under this heading was 58 and in 1893 it was 59, in 1900 the figures had sunk to 25. For England and Wales the statistics for the first three-quarters of the present year are not as yet available, but, thanks to the courtesy of Dr. J. F. W. Tatham, I am able to state that in London during that period only two deaths occurred in which vaccination was referred to in the certificate. In this connexion also it may be mentioned that at the last dinner of the Public Vaccinators' Association Dr. G. Danford Thomas was able to state that, contrary to his experience in former years, he had not had occasion in the course of his duties as coroner to hold an inquiry into a single case in which death was alleged to have been in any way due to vaccination since the date on which the Act of 1898 came into operation.

A couple of years hence the whole question of vaccination must again occupy the attention of the Legislature, by which time we may perhaps hope to have made further advance both in our methods and in the results obtained therefrom. For there is no finality in scientific work, and if in connexion with the subject under consideration much has already been accomplished in the past there are still undoubtedly many points awaiting elucidation in the future.

In conclusion, I desire briefly to call attention to a matter which has always aroused keen controversy and which just now must needs be of special interest—the question, namely, as to the relationship of vaccinia to small-pox. For, not unfrequently, the difficulty experienced by myself and many other investigators in attempts to transmit human small-pox to bovines, whether cows or calves, has been cited as a reason for regarding with distrust the theory first expounded by Dr. Jenner, that cow-pox, whether carried through the horse as intermediary host or not, was originally derived from small-pox in the human being. But a great deal, at any rate, of the small-pox which was prevalent during the time that Dr. Jenner lived and wrote was of that comparatively mild variety which, under the name of "inoculated small-pox," was intentionally produced in healthy subjects, with the object of thereby conferring protection against subsequent attack by the disease in virulent form. So mild, indeed, at times were the results of inoculations in the hands of such operators as Adams and the brothers Sutton that no obvious effect was observed, with the exception of the local vesicle arising at the site of insertion of the small-pox virus, and the patients suffered but little inconvenience. Many of them doubtless, therefore, would be capable of following their ordinary avocations, which would hardly be possible in the case of persons contracting small-pox in the ordinary way, among whom the disease was apt to exhibit such virulence as to account for the death of perhaps 50 per cent. of those attacked.

Not only were the effects following on inoculation comparatively mild, but the disease in this form was intentionally brought into many country districts which otherwise might not have become invaded. In the light of these facts, it has for some years past been borne in upon my mind more and more convincingly that it was not improbably from the *inoculated form* of small-pox, rather than the ordinary variety, that much of the cow-pox in the pre-vaccination era was derived. It is not difficult to understand how that the cracks so often found on the udders of a cow might become infected by a milker with fingers contaminated by contact with the inoculated sore upon his arm.

I determined, therefore, if possible to put the matter to the test, and learning that in Nubia and in certain parts of India the inoculation of small-pox is still carried out, I made numerous endeavours to obtain the necessary material, but unfortunately, up to the present, without success.

In default of inoculated small-pox in the human subject I made trial of the monkey, which my previous work had shown to be readily susceptible to the disease, the various phases of which in this animal closely resemble those observed in man. The experiments were commenced in 1898 and the small-pox material has been obtained from cases coming under observation during outbreaks of this disease at Middlesbrough, Glasgow, and London. In each of three separate series of experiments the human small-pox lymph or pulp was first inoculated directly on calves and, in every instance, so far as could be observed, with altogether negative results. But with monkeys success was as invariably obtained, and when, after one or more passages through this animal, the contents of the local inoculation vesicles were employed for insertion on the calf, an effect was now produced which, after one or more removes in that animal, was indistinguishable from typical vaccinia. Moreover, from the contents of vesicles raised in this manner on the calf a considerable number of children have in turn been vaccinated, and afterwards kept under observation for about a couple of months. Every such vaccination "took" normally and in no case was any bad result subsequently observed by myself or by the parents of the children, no "generalisation" of the eruption occurring in any instance. (A series of photographs of monkeys, calves, and children was shown on the screen.)

The point of interest in these experiments is found in the fact that whereas the human small-pox material employed could not be got to "take" directly on the calf, nevertheless results typical of ordinary vaccination were obtained when the strain of lymph, after inoculation with it of a series of monkeys, was again transferred from the inoculation vesicles on this animal to the epidermis of the calf. Interesting corroboration of my results has recently come to my knowledge in which the use, on calves, of lymph from the vesicles of cases of human inoculated small-pox has afforded opportunity, in Burmah, of originating, on several different occasions, strains of excellent vaccine lymph.

Earl's Court-square, S.W.

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LUNACY IN DEVONSHIRE.—At the meeting of the Exeter Corporation Asylum Committee held on Dec. 11th it was decided that draft plans for additional accommodation for 50 patients should be presented to the Commissioners in Lunacy for approval.

# OBSERVATIONS ON THE ETIOLOGY AND MORBID ANATOMY OF TUBERCULOUS MENINGITIS.[1]

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FOR the data of this paper I have taken the records of the last 27 cases of tuberculous meningitis which have been under my care during life and have been subsequently examined in the dead house (vide Table). Though the number is too small to justify dogmatic statements on any one point, the results obtained from the inquiry are sufficiently definite to enable me to bring before you certain deductions as to the etiology of the disease.

1. *The age distribution.*—The following table shows the age distribution:—

| Age in years. | Males. | Females. | Total. |
|---|---|---|---|
| 0 to 1 ... ... ... ... ... ... ... | 0 | 3 | 3 |
| 1 „ 2 ... ... ... ... ... ... ... | 5 | 1 | 6 |
| 2 „ 3 ... ... ... ... ... ... ... | 2 | 3 | 5 |
| 3 „ 4 ... ... ... ... ... ... ... | 1 | 3 | 4 |
| 4 „ 5 ... ... ... ... ... ... ... | 2 | 2 | 4 |
| 5 „ 10 ... ... ... ... ... ... ... | 4 | 1 | 5 |
| —— | 14 | 13 | 27 |

No less than 22 out of the 27 cases occurred during the first five years of life and only five during the second five years. This result confirms those of other observers that the disease is most common under five years of age. Some writers state that it is rare during the first year and give statistics in support of their statements. Others find it frequent during the first year. It is not always clear, from the figures quoted, whether the statements are based on cases diagnosed during life or only on those which have been verified after death. If the figures are based on clinical records only it is probable that the frequency of the disease during the first year would be over-estimated, on account of the difficulty in invariably making an accurate diagnosis between the simple posterior basal meningitis, which is unduly prevalent during the first year of life, and true tuberculous meningitis. My own figures show that the distribution of the cases during these first five years is fairly equal for the different years. There is no preponderance of either sex—14 males to 13 females.

2. *The influence of heredity.*—In recent years it has become customary to ascribe very little importance to heredity in the production of tuberculous affections, except in so far as the sufferers are exposed to direct infection from association with a tuberculous relative, or may inherit a peculiarity of constitution which renders them susceptible to such infection. It is well known how difficult it is in hospital practice to obtain accurate family histories and that all statements as to the occurrence of "consumption" in the parents or other relatives must be viewed with suspicion. The results obtained on this point are opposed to the theory of heredity but must not be too strongly insisted upon. In 22 of the cases it was definitely stated in the notes that there was no history of phthisis in the parents or other children. Of the remaining five cases a few facts may be given. In only one case was the mother stated to be affected.

CASE 14.—The patient was a female, aged 6 months. The mother was said to be very ill with "consumption and bringing up blood." The child was only nursed for one week and was then brought up on condensed milk. She had been taken out of doors very little. She died with symptoms of tuberculous meningitis, and there were found, in addition, tuberculous consolidation of the upper lobe of the left lung, a cavity in the upper lobe of the right lung, general dissemination throughout the lungs, and a few tubercles in the spleen. No note was made as to the condition of the mediastinal or mesenteric glands.

No better instance could be given of probably direct infection from the mother through the respiratory tract. The next four cases also illustrate the possibility of direct infection from a parent.

CASE 2.—The patient was a female, three years and nine months old, who died after an illness of 19 days' duration. Tubercles were found in the meninges, liver, and spleen. No caseous glands were found. The cribriform plate of the ethmoid was carious. While the child was ill the father was an in-patient at the Brompton Hospital for Consumption.

The case suggests strongly that infection took place through the nose. To quote Osler: "In those instances in which no primary focus has been discovered it has been suggested that the bacilli reach the meninges through the cribriform plate of the ethmoid from the upper part of the nostrils, but this is not probable." It is certainly not probable that the meninges can be infected by this route unless disease of the bone is first set up. The possibility of direct infection is present in the next case, which also presents another point of interest, to be subsequently discussed—namely, the influence of injury in the production of the attack.

CASE 1.—The patient was a female, aged two years and six months, who died after an illness of 17 days' duration. After death there were found basal meningitis, with only a few tubercles in the meninges, and no evidence of a tuberculous focus. A few pleural adhesions were present at the apex of the right lung. The child had a fall three weeks before the onset of the symptoms. The father was said to be "consumptive" and a sister was at the time in the Brompton Hospital for the same disease. It is a question whether the tubercles in the meninges were the primary cause or secondary to a basal meningitis set up by the fall.

The other two cases presented interesting features. In both the father was said to be "consumptive."

CASE 19.—The patient was a male, aged two years, who died after an illness of 18 days' duration. A large cavity was found in the lower lobe of the left lung; there were general dissemination throughout the lungs and caseous mediastinal glands.

CASE 24.—The patient was a male, aged three years and seven months, who developed left hemiplegia during the course of the illness. An old tuberculous mass was found in the right external capsule and tuberculous nodules in the cerebellum. The lungs were stuffed with tubercles and the mediastinal glands were caseous. Only one tubercle was present in the spleen.

These five cases were the only ones in which a family history of tuberculous disease was obtained and they all illustrate the probability of direct infection.

3. *Injury as an etiological factor.*—In only one instance (Case 1), that already referred to, could injury be invoked as the exciting cause of the disease. Even in this case it is possible that the meninges had become infected before the injury, for the presence of pleuritic adhesions at the right apex suggests former tuberculous mischief. All text-books recognise the importance of this point. It is more specially applicable in the case of children who go to school. For some reason or other the child receives a box on the ear, or a rap on the head by the knuckles or ruler or other punitive instrument in the hands of the teacher. Subsequently the child dies from tuberculous meningitis which is ascribed by the parents to the injury. Possibly the unfortunate teacher is hauled before a coroner's court and severely censured by a typical British jury. The common and usually accepted explanation is that the child was punished for the stupidity or inattention, the state of mind so likely to be present during the early stages of the disease. It is therefore imperative in such cases that a careful post-mortem examination should be made in order to ascertain whether there is a tuberculous focus present which might have given rise to the meningeal infection. On the other hand, a case like the one quoted might be brought forward as an argument in favour of injury being the exciting cause. Injury to the brain or meninges might cause local congestion or damage of such a nature as to render the affected part a suitable soil for the growth of the tubercle bacillus, which without such advantageous conditions might have perished. This is the only instance out of the 27 cases which is favourable to this view.

4. *The channel of entrance of the bacillus into the system.*—In view of the recent discussions and observations on the

[1] A paper read before the Society for the Study of Disease in Children on Nov. 15th, 1901.

TABLE GIVING DETAILS OF NECROPSIES IN 27 CASES OF TUBERCULOUS MENINGITIS.

| No. | Sex. | Age. | Pleura. | Lungs. | Glands. | | Other lesions. |
|---|---|---|---|---|---|---|---|
| | | | | | Mediastinal. | Mesenteric. | |
| 1 | F. | 2½ years. | A few adhesions at the right apex. | No tubercle. | Normal. | Normal. | A few tubercles at the base of the brain. No other evidence of tuberculosis. |
| 2 | F. | 3¾ years. | — | ,, | ,, | ,, | Tubercles at the base of the brain. Caries of the cribriform plate of the ethmoid. |
| 3 | M. | 13 months. | — | ,, | Caseous. | ,, | — |
| 4 | F. | 3½ years. | — | ,, | ,, | Caseous. | Peritoneal surface of the diaphragm covered with miliary tubercles. |
| 5 | M. | 4½ years. | — | ,, | ,, | Normal. | — |
| 6 | M. | 9 years. | Old adhesions of the left lower lobe. | ,, | ,, | ,, | — |
| 7 | F. | 2 years. | Recent adhesions on the right side. | Scattered miliary tubercles in two upper lobes of the right lung. | ,, | ,, | Broncho-pneumonia of the left lower lobe. |
| 8 | F. | 4½ years. | A few tubercles on the right pleura. | A few tubercles in the lower lobe of the right lung. | ,, | ,, | |
| 9 | F. | 1½ years. | A few tubercles on both parietal pleura. | General dissemination. | ,, | Large. | A few tubercles on the parietal layer of the pericardium. |
| 10 | F. | 4½ years. | Tubercles scattered over both pleura. | ,, | ,, | Normal. | — |
| 11 | M. | 4¾ years. | Old adhesions at the right apex. | Stuffed with rather advanced miliary tubercles. | ,, | ,, | Liver and spleen large; tubercles in both. Perisplenitis. |
| 12 | M. | 5 years. | — | General dissemination. | ,, | ,, | — |
| 13 | F. | 8 years. | — | Slight general dissemination. | Very extensively caseous. | ,, | Acute endocarditis. |
| 14 | F. | 6 months. | — | Tuberculous consolidation of the left upper lobe. Cavity in the right upper lobe. General dissemination. | Not noted. | Not noted. | — |
| 15 | F. | 6 months. | — | Caseous patches in the right middle and lower lobes. General dissemination. | Caseous. | Normal. | — |
| 16 | F. | 11 months. | — | Caseous mass and cavity formation in the right lower lobe. | ,, | ,, | — |
| 17 | M. | 1½ years. | Right lower lobe universally adherent. | Extensive caseation of the right lower lobe. | ,, | ,, | Liver large |
| 18 | M. | 1½ years. | Pleuritic adhesions at the right base. | Caseous mass at the base of the right lower lobe. | Not noted. | Not noted. | — |
| 19 | M | 2 years. | Pleuritic adhesions. | Cavity in the left lower lobe and tubercles in the rest of the lung. A few in the right lung. | Extensively caseous. | Normal. | — |
| 20 | F. | 2 years and 10 months. | Recent adhesions of the right upper lobe. | Caseous patch in the right upper lobe, beginning to break down. | Caseous. | Large. | — |
| 21 | F. | 3 years. | Patch of tubercles on the right parietal pleura and adhesion to diaphragm. | Extensive tuberculous broncho-pneumonia. | ,, | ,, | Tuberculous cholangitis; perihepatitis; perisplenitis. |
| 22 | M. | 6 years. | — | Old fibroid change; recent tubercles and caseous masses in the right upper lobe. Caseation of both lower lobes extending from glands. | Very extensively caseous. | Normal. | — |
| 23 | M. | 7 years. | — | Caseating right upper lobe due to rupture of a caseous gland into it. | Caseous. | ,, | — |
| 24 | M. | 3 years and 7 months. | — | General dissemination. | ,, | ,, | Tuberculous mass of old standing in the right external capsule. Tuberculous nodules in the cerebellum. |
| 25 | M. | 13 months. | — | General dissemination, especially at the right apex. | ,, | Caseous. | Tuberculous suncutaneous nodules. Four caseating nodules in the brain. |
| 26 | M. | 1 year and 5 months. | — | General dissemination. Small vomicæ in the right upper and left lower lobes. | ,, | ,, | Tuberculous ulcers (two) in the small intestine. Perisplenitis. |
| 27 | M. | 2 years. | — | Caseating and calcifying nodule in the right middle lobe. | ,, | Extensively caseous. | Intestines not examined. |

relationship of the bacillus of bovine tuberculosis to that of the human disease, and on the infectivity of the milk of tuberculous cows, this point is one of extreme importance. In the last edition of Fagge's Text-book of Medicine (vol. i., 1901), edited by Pye-Smith, it is stated in the chapter on Tuberculous Meningitis that "the exciting cause is the entrance of Koch's bacillus into the circulation, and in children this is probably by way of the intestinal tract from the milk of tuberculous cows." Kanthack, Delépine, and others have proved that the bovine tubercle bacillus is frequently present in cow's milk. It has been found by Bang, Bollinger, and others in the milk of cows affected with general tuberculosis or tuberculous disease of the udder. It has been experimentally determined by Hirschberger that the milk of tuberculous cows may be infective, even though the udder is unaffected. Kempner and Rabinowitsch in 1899 found the bacillus in the milk of cows which reacted to tuberculin but gave no other evidence of tuberculosis, and their results have been confirmed by Ostertag, Adami, and Martin. There is, in fact, no shadow of doubt that the bovine tubercle bacillus is often present in cow's milk. One warning must be given on this point. Acid-resisting bacilli similar in nature and appearance to the tubercle bacillus have been also found in milk (Petri, Beck, Santoni, Rabinowitsch, &c.), in the udder (Ludwig Neufeld), in the intestines of healthy and tuberculous cows (Olt), in the timothy grass sometimes used for fodder (Moëller), and in the dung (Severin). These bacilli cannot be distinguished microscopically but can be readily distinguished by intra-peritoneal injection into guinea-pigs. Tuberculosis can be produced in calves and pigs by feeding them on tuberculous milk, and by analogy it has been assumed that a similar result will arise in children. In support of this the reports of the Registrar-General are often quoted. In these reports it appears that the disease called "tabes mesenterica," usually regarded as a tuberculous affection, is increasingly prevalent among infants. With regard to this latter statement I wish to enter a very strong protest. Tabes mesenterica is very rare among infants, and there is little doubt that almost all the cases so entered in mortality statistics as occurring in infants under one year of age are neither more nor less than the interesting disease known to the public by that blessed name "consumptive bowels"—that is, diarrhœa and wasting due to improper feeding and ending in death. I have never yet seen a true case of tabes mesenterica in an infant examined post mortem, although I have been constantly on the watch for one, and I am strongly convinced that it would conduce to scientific accuracy if the name were eliminated from our nosology.

To return to the point under consideration. The main channels of infection are the respiratory and the alimentary tracts. Of quite secondary importance are the ear and skin, both of which occasionally prove channels of infection. Let us consider, then, what evidence these post-mortem records yield in favour of one or other of these modes of entry of the bacillus. Using the term "mediastinal glands" to include all the glands in the anterior and posterior mediastinum, at the bifurcation of the trachea, and at the roots of the lungs, a most striking fact is at once revealed. In only two instances were these glands normal and in these the tuberculous process was limited to the base of the brain, being in one of them associated with caries of the cribriform plate of the ethmoid, and in the other possibly secondary to a localised pleurisy at the apex. In two other instances (Cases 14 and 18) no note was recorded as to the condition of these glands, but I have little doubt that, considering the advanced tuberculous disease in the lungs, the glands must almost certainly have been affected. In the remaining 23 cases one or more of the mediastinal glands was caseous. The one most often affected, frequently the only one, was the gland situated at the bifurcation of the trachea, commonly called the pretracheal gland. In four of these 23 cases the mesenteric glands were also caseous. In one of these four (Case 4) the peritoneal surface of the diaphragm was covered with miliary tubercles and there were tubercles in the spleen, while the lungs only showed evidence of bronchitis. The other three cases, in which both sets of glands were caseous, are of much interest.

CASE 25.—The patient was a male, 13 months old, who was under my care for two months for subcutaneous tuberculous nodules. There were four such nodules, varying in size from a split pea to a horse-bean, one of which was said to have been in existence since the age of four or five months. He developed meningitis from which he died. In addition to tuberculous basal meningitis the brain was found to contain caseating nodules, the lungs showed general dissemination, especially at the right apex, and there was extensive caseation of the mediastinal and mesenteric glands, with a few tubercles in the spleen.

In the other two (Cases 26 and 27) there was evidence to warrant the assumption that the abdominal tuberculosis was secondary to the swallowing of tuberculous material coughed up from the lungs. Thus, in a boy, aged 17 months, tuberculous vomicæ were found in both lungs and two small tuberculous ulcers in the small intestines. In a boy, aged two years, an old caseating and calcifying nodule was found in the lung, but unfortunately the intestines were not examined. In nine instances there was more or less dissemination in the lungs, or in the lungs and pleura, but no evidence of old-standing disease. In only one of the nine, the child with subcutaneous nodules, were the mesenteric glands caseous. In 12 instances the lungs showed extensive tuberculous disease of old standing—namely, caseation and in some cases excavation.

Looking at the facts from another point of view it seems somewhat remarkable that, if the alimentary canal is so liable to tuberculous infection as the upholders of the theory of infection by tuberculous milk would have us believe, in only two out of these 12 cases in which the disease was advanced and of old standing in the lungs was there evidence of infection of the mesenteric glands. In two the state of these glands was not noted. Of course, it is clear that such infection may have been present and that microscopical or experimental evidence might have proved some of these glands infected; but even if this were so, the facts strongly confirm the view that the respiratory tract was the primary source of infection. It is also clear that the alimentary tract is not markedly susceptible to infection by the human tubercle bacillus.

It has been stated that the tubercle bacillus of cattle is not dangerous to human beings. Even if we only accept the statement in a modified form and say that the bovine bacillus is not nearly as infective as the human bacillus, our post-mortem facts afford a still stronger proof of the insusceptibility of the alimentary tract to infection by the bovine bacillus, seeing that it so often escapes although exposed to the risk of infection by the human bacillus in chronic tuberculous disease of the lungs. In young children, as is well known, sputum is swallowed and not expectorated. Consequently the liability to secondary infection of the alimentary canal is enormous, whereas the post-mortem evidence proves it to be infrequent. In six instances was there no evidence of tuberculous disease of the lungs and yet in four of these the mediastinal glands were caseous. In one of the four the mesenteric glands were also caseous. It is possible that in these cases a small tuberculous lesion may have healed and left no trace visible to the naked eye or that the bacillus reached the gland through some other channel. In some instances in which the lung was affected the question arose whether the lung mischief was primary or secondary to an extension from the glands. In one case it was clear that the main part of the lung disease was due to the actual rupture of a breaking-down gland into its substance (Case 23). In some others the tuberculous process could be seen extending backwards from the glands along the lymph channels in a radiating fashion into the lungs. The probable sequence of events in most cases is that the bacillus is carried by the blood or lymph stream to a congested gland and there develops, finally causing caseation. Such a caseous gland may remain quiescent, may become calcified, may break down, may ulcerate through into the trachea or œsophagus, or may rupture into the lung or pleural cavity. In any case if it breaks down the infective material may become widely disseminated and cause a general infection. The post-mortem evidence may be summed up shortly as proving that the respiratory tract is the great channel of infection. It therefore follows that the danger from swallowing tuberculous cows' milk has been much exaggerated.

It is sometimes asserted that the bacillus can get into the system through the alimentary canal without producing a local lesion. Caseous mesenteric glands are found although the mucous membrane of the intestines appears normal. If the bacillus does not pass out of the intestines through the lymph channels to the glands it might possibly pass into the blood stream. Practically all the blood from the intestines goes through the liver. We should expect, then, that if the bacillus passed into the blood stream it

would produce tuberculous disease of the liver. Miliary tubercles are indeed found in the liver, more often in the spleen, and less often in the kidneys, but only when there is considerable general dissemination throughout the body. It is rare to find old tuberculous foci in the liver and in none of these cases was such a focus found. There is no evidence at all strongly in favour of infection of the blood stream through the intestinal tract.

5. *Evidence derived from the diet of the patients.*—In eight out of 13 infants under three years of age the child was brought up on the breast for the greater part or all of the first year of life. In four the mode of feeding was not stated. In one the child was brought up on condensed milk, for the mother was too ill from tuberculous disease of the lungs to nurse it. These facts, as far as they go, are suggestive that cow's milk is not a very virulent source of infection, for a very large number of infants are brought up on cow's milk. During the last 10 years I have brought up a large number of infants on cow's milk, and as far as I know not one of them has subsequently come under my care for tuberculous meningitis. The milk has been boiled if the mothers have carried out the directions given.

6. *The state of the brain as indicative of the prospect of operative treatment proving beneficial.*—In about one-third of the cases there was no excess of fluid in the ventricles. In the remainder the fluid varied from a slight excess to a large amount. In many instances the cerebral tissues were very soft and occasionally almost diffluent. Operative treatment can only be indicated as a means of relieving pressure and under the assumption that the child is dying from the coma induced by pressure. Such is not always the case, for many children died comatose in whom there was no evidence of increased intracranial pressure after death. The coma is probably due to the softening of the brain which may be associated with excess of fluid in the ventricles or may occur quite independently. Hence it is clear on anatomical grounds that operative treatment would only relieve pressure in about one-third of the cases, and that even in these cases it would do little or no good on account of the softening so often present and which is dependent upon insufficient blood-supply rather than on an excess of fluid. Moreover, these records indicate how very rarely the disease is limited to the brain and that the operation would only afford temporary alleviation of symptoms.

7. *Classification.*—It is possible to divide the cases on anatomical grounds into three groups: (1) simple tuberculous meningitis, in which the disease is limited to the brain (very rare); (2) tuberculous meningitis, secondary to a localised tuberculosis with little dissemination (the child dies from the meningitis); and (3) general miliary tuberculosis—cases in which the meningeal symptoms bear a comparatively unimportant relationship to the disease.

To conclude, I am strongly convinced that inheritance means exposure to infection of a weakly or predisposed child; that injury is very rarely an exciting or predisposing cause; that the respiratory tract is the great channel of infection; that the alimentary tract is rarely primarily infected; that cow's milk is very rarely, if ever, the source of infection; that limitation of the tuberculous process to the meninges is very rare; that the prognosis is very hopeless on account of the extent of the tuberculous disease elsewhere; and that operative treatment may be discarded as experimental rather than useful.

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## OVARIOTOMY IN PREGNANCY: THREE RECENT CASES.

BY JOHN B. HELLIER, M.D. LOND.,

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CASE 1. *Ovariotomy at the third month of pregnancy; full term delivery.*—A married woman, aged 32 years, was admitted into the Leeds General Infirmary on Nov. 29th, 1900, for ovarian tumour. She complained that the abdomen had remained large since her last confinement, two years previously, and had steadily increased in size. She had missed two periods. The abdomen was distended by a large ovarian cyst reaching to within three fingers' breadth of the sternum; the umbilical girth was 35½ inches. Fluctuation and thrill were very perceptible. On vaginal examination the uterus was felt lying anteverted, with a bulky fundus felt through the anterior vaginal wall. The cervix was soft; there were vulval and mammary signs of pregnancy. Ovariotomy was performed on Dec. 1st. The cyst, which contained 164 ounces, was large, multilocular, and non-adherent; the pedicle was from the left side. The right ovary, which was enlarged but not cystic, was not removed. The uterus was about three months pregnant and felt like a flaccid cyst. The wound healed by first intention and the patient made a good recovery with no threatening of abortion. She went to full term and bore a living child.

CASE 2. *Ovariotomy at the fourth month of pregnancy; full-term delivery.*—A married woman, aged 34 years, was sent to me by Mr. W. F. Chrispin of Castleford. Her last confinement was in July, 1900; menstruation returned in September and ceased again at Christmas. She had noticed an increase in the size of the abdomen about Jan. 1st, 1901. She was admitted into the Leeds General Infirmary on March 4th. She said that she had been married 15 years, had had 13 pregnancies and no miscarriages, but only one of her children had lived for more than 13 months. Her own health and general condition were good. The abdomen contained a uterus four months pregnant and a mobile tumour in the umbilical region which seemed to be loosely connected with the uterus. The tumour was rather solid on palpation. The usual signs of pregnancy were present. Ovariotomy was performed on March 9th and the tumour proved to be a semi-solid multilocular cystoma with the pedicle from the left of the uterus. There was extensive adhesion to the omentum and small bowel. The right ovary was normal. The uterus was four months pregnant. The operation was completed in the usual way; no drainage was employed. A continuous catgut suture was used for the peritoneum. The patient made a good recovery, except that there was some suppuration in the wound and the catgut came away entire and unabsorbed 11 days after. She had also a roseolous rash on the fifth and sixth day, which was followed by some desquamation. There was no threatening of abortion. She went to full term and bore a living child on Sept. 1st and made a good recovery.

CASE 3. *Ovariotomy for dermoid cyst in the sixth month of pregnancy; still-born child at the eighth month.*—This is a very interesting case. On May 13th, 1901, Mr. R. Smailes of Leeds asked me to see with him a patient, aged 42 years, who was five months pregnant and in whom he had discovered a post-uterine tumour. She had had three previous normal pregnancies and two miscarriages, the last being in the summer of 1899. After this she menstruated regularly till December, 1900, when she became pregnant. When two months pregnant she had some vaginal coloured discharge and the uterus was found to be retroflexed, and a pessary was applied. In April an examination was made to determine the position of the uterus, and the tumour was found in the pouch of Douglas. When I saw the patient she was a healthy woman in good condition and had no symptoms to suggest that pregnancy was abnormal. On vaginal examination an elastic cystic mobile tumour was found in the pouch of Douglas. It could be pushed up but soon returned. It seemed to be almost certainly ovarian and its removal was strongly advised, as it might cause serious complication in labour if it was left alone. Ovariotomy was performed in a nursing home on May 27th, Mr. Smailes administering chloroform, and Mr. C. H. Moorhouse assisting me. A median incision exposed the large flaccid uterus reaching to the umbilicus. The pedicle sprang from the right side; the oviduct was so greatly enlarged that it had to be examined carefully to make sure that it was not small intestine which it resembled. As traction on the pedicle did not easily withdraw the cyst the hand was introduced around the flaccid uterus and the cyst was extracted entire. The pedicle was twisted, the tumour was deeply congested, and there was free ascitic fluid. The left ovary was normal. The operation was concluded in the usual manner, with a continuous catgut suture through the peritoneum and interrupted silkworm gut through the skin and muscle. The tumour was a dermoid cyst containing hair and sebaceous material and of about the size of an orange. During the first 24 hours after the operation the patient had more severe abdominal pain than I ever had observed after a successful abdominal section. She described the pain as agonising. There were no other bad symptoms and morphia administered hypodermically relieved the pain. She made an excellent recovery. The wound healed by first intention and she went home on an

ambulance at the end of three weeks and rested a week in bed. She got up and felt well, but said that she thought the child was dead. The abdomen did not increase and the breasts were flaccid. On August 5th she was delivered of a stillborn male fœtus about eight inches long and very slightly macerated. The uterine surface of the placenta showed calcareous degeneration. She made a good recovery.

In Case 1 the enlargement of the right ovary might well be caused by that physiological enlargement of an ovary which is due to the presence of the corpus luteum of pregnancy. This condition ought to be borne in mind lest the mistake should be made of removing such an ovary. In Case 3 the operation for a small ovarian tumour concealed behind a large pregnant uterus is unusual. It was fortunate that the cyst was discovered. Its removal was easy, but if there had been adhesions in the pelvis the operation might have been difficult. It might have been necessary to extend the incision and to draw forward the womb. The child seems not to have survived the time of the operation. The cause of death is obscure, the operation was short, there were no symptoms of sepsis afterwards, and practically no pyrexia. The very severe pain and the morphia injected for it may have had something to do with the result. It is important to note that vaginal tapping would have been of no avail to lessen the cyst at the time of labour, the contents being caseous.

Ovariotomy is now recognised as the best treatment for almost all cases of pregnancy complicated by ovarian tumour, and the earlier it is done the better. It is best for the mother and best for the child (I do not here discuss the treatment of ovarian cyst at the full term and during labour). To leave the case untreated involves a risk of torsion of the pedicle amounting to 9 per cent., and also a risk of damage to the tumour in labour, especially in such a case as No. 3, and as pregnancy advances the ovarian pedicle is apt to become shortened by absorption of the broad ligament and hence the operation is less simple. The mortality of the expectant method was found by Remy to be 23 per cent. for the mother and 39 per cent. for the child.[1] The mortality in cases in which pregnancy has been terminated for the presence of ovarian tumour was 22 per cent. in 135 cases collected by Dsirne.[2] On the other hand, the mortality of ovariotomy in pregnancy performed with modern precautions is estimated at 5·9 per cent. by Dsirne, 8·4 per cent. by V. Weiss, and 4·09 per cent. by Vinay.[3] About one-fifth of the cases abort. The best results for the child are obtained between the third and fourth month. Even double ovariotomy has yielded good results for the child. In 17 cases there were only two abortions and three premature labours.[4]

Leeds.

## A CASE OF EPIDEMIC DIARRHŒA IN AN INFANT TREATED BY IRRIGATION OF THE BOWEL.

BY WILLIAM B. BENNETT, M.R.C.S. ENG., L.R.C.P. LOND.

CASES of epidemic diarrhœa in infants during the past months have as usual been very numerous and very fatal. In his report on the health of the City of Liverpool during 1900, the medical officer of health (Dr. E. W. Hope) informs us: "As is always the case, the mortality from diarrhœa chiefly affected infants, nearly three-fourths of the total number of deaths being those of infants under 12 months old. It commenced to increase about the end of June and continued until October. 900 deaths were registered during this brief period, and to these must be added deaths from the closely allied or identical disease, English cholera."

The usual remedies for this deadly disease are very numerous and generally very useless. Having had many cases of epidemic diarrhœa under my care during last summer I have usually adopted the recognised forms of treatment. The diet, of course, in all cases is of the first importance, and here it is a matter of experience that all milk and food containing milk should be cut off at once, white of egg and water, or barley-water alone, being the best diet for a few days. This alone in early simple cases is often sufficient, the vomiting particularly being very quickly arrested. A full dose of castor oil as early as possible is also excellent if it can be retained. The majority of cases, however, do not come under notice until the infant has been ill for some days, and even in early cases the above treatment is often quite insufficient, the diarrhœa and pain persisting. The drugs used are numerous, but many of them, particularly powders, are immediately vomited and so are useless. Grey powder, or some antiseptic such as the solution of perchloride of mercury, is very popular and useful, but the infant becomes so emaciated and weak in a very short time that some more immediate remedy is needed. The usual astringents are often of no avail, only acting as emetics, and then recourse is had to opium in minute doses, which is frequently necessary owing to the intense pain. So many of these cases after the most careful treatment end in convulsions, emaciation, and death that one is driven to the conclusion that these routine remedies are really of very little use, as is well shown in the following case, an account of which should prove of some interest since the child was cured in an unusual, but very simple, manner.

An infant, aged seven months, was taken ill with vomiting and diarrhœa on August 3rd, 1901. The mother gave him a dose of castor oil but no improvement taking place she brought him to me on the evening of the 4th. The child was then vomiting, being continually purged and in great pain, drawing up his legs on to the abdomen. I stopped all milk and other food and put him on barley-water only. This at once relieved the vomiting but the diarrhœa persisting I gave him on the 5th one and a half drachms of castor oil besides small doses of the solution of perchloride of mercury every three hours. No improvement taking place and the abdominal pain being exceedingly severe on the 6th I added to the perchloride one-minim doses of tincture of opium. This gave some relief to the pain and at first diminished the number of motions also. The stools were throughout very watery and slimy and during the first few days the smell was very offensive. The number of movements during the 24 hours varied from eight to 12, each being accompanied by severe abdominal pain. I tried, amongst other drugs, bismuth subnitrate, but it was at once thrown up. In this state the child continued until the 9th when the number of motions and the pain became greater and in the afternoon he had severe convulsions which were, however, controlled by bromide of potassium. On the 11th the convulsions returned, requiring more bromide. The child was now in a very serious condition, the tongue being dry, red, and raw, the abdomen tense and tender, and a painful movement of the bowels taking place every hour or oftener. I had more than once dropped the opium for a short time, but only with worse results. On the 12th I adopted a new line of treatment, washing out the large bowel with a hot weak antiseptic. I decided to wash out the bowel on account of the great success of this method in cases of acute dysentery in South Africa, as many of us when serving there as civil surgeons had found. I used a solution of permanganate of potassium, about a teaspoonful in a pint of water. The child was held on the mother's lap on his side, and 12 ounces of the hot solution were forcibly injected into the rectum with an ordinary Higginson's syringe. It was impossible to inject a greater quantity, as this amount was only injected with great difficulty and very slowly owing to the violent efforts of the child to expel it. On the nozzle being withdrawn the fluid was immediately shot out in all directions. I then in the same way injected about eight ounces more, meeting with the same opposition and result. The child seemed none the worse and I stopped all medicines from that moment.

The subsequent history was as follows. The child had no more pain or diarrhœa, and seemed very comfortable when I went away shortly afterwards. He soon fell asleep and in the afternoon had an easy movement of the bowels, formed and natural in all respects and without any of the previous straining or pain. During the night he slept well and on the morning of the 13th the mother told me that he laughed for the first time since he had been taken ill. On the morning of the 14th, the tongue being moist and clean and the child comfortable in all respects, he resumed small quantities of the prepared food which he had previously been taking. In the evening, no movement of the bowels having taken place for 48 hours, one drachm of castor oil was given and two

[1] Pfannenstiel in Veit's Handbuch der Gynäkologie, Band iii., 1, p. 489.
Archiv für Gynäkologie, Band xliii., Heft 3; also Norris, Obstetrics, 1., p. 249.
[2] Pfannenstiel, loc. cit.
[4] Mainzer, see Veit, loc. cit.

drachms more were administered the following morning, as the first had taken no effect. The bowels were twice moved the same day. Except for the emaciation and weakness the infant now seemed to have quite recovered, his digestive tract causing him no more trouble. For a week or two he was naturally weak, but two or three weeks later he was quite strong and since then has had no relapse.

The advantages of the above method are quite obvious. It is easily and quickly carried out, is quite safe, and is very speedy in its results. My only regret in the above case was that I had not adopted the final treatment much earlier. For the future, if correction of the diet and the administration of some simple antiseptic is not followed by immediate beneficial results, I shall at once wash out the bowel in the manner described.

Liverpool.

## SOME OBSERVATIONS ON CERTAIN TROPHIC HINDRANCES TO BONY GROWTH.

BY HEATHER BIGG, F.R.C.S. EDIN.

SOME time ago Sir William Gowers asked me if I had any facts recorded in my notes which would enable the question to be answered, "What is the difference in the rate of hindrance to growth of bone in infantile paralysis as years go on?" And again, quite recently, he wrote to me to know if I had ever met with a case similar to one which he "had lately seen in which in a year or two there was considerable elongation of the paralysed leg and it had clearly occurred at the hip-joint." This latter question is somewhat cognate with the former and I might readily have answered both from my own recollected experience, but as the subject which he suggested seemed one of very great interest I determined to make a complete analysis of my measured records of cases of infantile paralysis over the last 20 years and the results so obtained are indicated in this paper.

I should state that in all cases in which I have found that the limbs required mechanical appliances I have invariably been in the habit of taking, in addition to careful measurements, an accurate outline tracing of the limb on a sheet of brown paper. When these tracings have accumulated over some years they have been sorted and those that have ceased to be of further service have been destroyed. I have recently gone over and destroyed some thousands of superannuated tracings that have accumulated since 1880, and out of these I picked the tracings and measurements of 590 cases of infantile paralysis which seemed suitable for the investigation which Sir William Gowers had suggested. I found that a very large proportion of these cases had been sent to me by himself, by Sir J. Russell Reynolds, and by Dr. Julius Althaus, and that in the older instances I had complete records of dimensions extending from earliest childhood up to the adult termination of bodily growth.

For the purposes of correct comparison I have taken only the lower limbs as the basis, and I have selected solely those cases that are unilateral in order that the irregular growth of the affected limb might have the regular rate of growth of the sound one as a definite standard for distinction. Moreover, as regards dimensions I have disregarded all minor measurements, circumferential or otherwise, and have taken as the simplest index the difference between the lengths of the two limbs from the iliac crests to the ground-surface of the heels. In other words, the record that I have selected as the figure for analysis is that amount of heightening that it is necessary to superadd to the heel of the shorter limb in order that the pelvis may be rendered truly level at its iliac crests when the patient is standing with straight legs. It is true that in many cases I have also taken the boot-maker's records of the respective lengths of the feet as adjunctive data; but only for confirmatory purposes, as a foot-length is scarcely a reliable index of growth, seeing that a paralysed foot will often be spuriously lengthened by the falling and flattening of its arch.

In an ordinary case of infantile paralysis such as is most commonly met with it is at the outset the motor failure that is principally obvious, and as a rule it is this alone that draws attention to the nature of the disease, whether the motor failure be shown by a complete loss of power in a limb or only by such slight difference in the balance of muscular power as merely leads to some little peculiarity of gait. But from the onset of the disease up to the adult termination of growth there becomes evident (apart from muscular wasting) a distinct trophic hindrance to bony development, and the question that I have sought to answer in my measured analysis of close on 600 cases is, What is the prospective amount and the relative duration of this hindrance during the whole period of bodily growth? I may say at once that the cases separated themselves into three distinct groups which I will first enumerate and then consider in detail. These groups are as follows: (1) cases in which the trophic hindrance continues during the whole period of bodily growth up to adult age and in which the difference in length between the sound and the affected limbs continues progressively to increase during that period; (2) cases in which the hindrance lasts only for a time, after which both the sound and affected limbs continue to grow at the same rate and the then existing difference between the two remains stationary; and (3) cases in which after the hindrance has lasted for a time and then ceased the affected limb tends to catch the sound one up in growth and in some rare instances actually does so, so that the difference between them is either diminished or even extinguished.

*Group 1.*—The cases which fall into this first group and in which the trophic hindrance is continuous throughout the whole period of bodily growth are by no means the commonest. The amount of loss in length varies and may be anything between three-quarters of an inch up to three inches, and even in rare cases more than this. The rate of hindrance to growth is generally even—that is to say, the heightening that has to be added to the shorter limb in order to keep the iliac crests level is superadded by regular increments during growth. Even with this trophic hindrance considerable motor recuperation may take place; and although from this it is clear that the trophic and motor changes bear no absolute relationship to each other, yet it is likewise a fact that those cases in which the original motor incapacity is the severest are generally those in which the trophic hindrance also becomes most marked, this probably being so because a more insuperable stretch of spinal cord has been (cicatricially?) involved. I notice also that the worst cases of which I have records are those that originated 30 or 40 years since—a fact that seems to show that more modern treatment goes a long way towards checking the severer results of the disease.

*Group 2.*—This group comprises what nowadays are the commonest cases—those in which the trophic hindrance comes to an acme, after which it wanes off into cessation and the two limbs continue their growth at an even rate together. For instance, if a child is attacked at two years of age and the heightening necessary to keep the pelvis level is added by increments of an eighth of an inch (that being my usual fraction of measurement) these additions are at first rapid and regular, then less so, and finally, at perhaps the age of 10 years, when the difference in the limbs may have reached from five-eighths to seven-eighths of an inch, no further addition is ever needed to be made. In brief, it would seem as if the trophic blockage in the spinal cord became gradually permeable and finally cleared.

Now, when I notice the very considerable shortenings that were common half a century since (as I find them recorded in my father's case-books), and when I see that the shortening nowadays is, on the average, much less, I can only conclude that modern treatment has had a great deal to do with this. Most of the cases of which I have kept records during the last 20 years odd have been under various medical treatments by medicine, massage, electricity, warmth, and the like, according to the special views of those who sent them to me, and, moreover, the mechanical treatment has materially altered. In the old days a completely paralysed limb was encased in a rigid instrument from hip to heel, and whilst easy walking became by such means immediately possible all muscular movement was precluded, and, as a consequence, no motor stimulus was ever sent through or against the block in the spinal cord. But nowadays the rightful treatment is afforded by giving the paralysed muscles only the exact amount of elastic assistance which they require, and in the efforts of walking and balancing the trophic and motor blockages in the cord tend to clear. The consequence is that not only does the trophic hindrance frequently terminate, but in a large number of instances the motor power is gradually restored from the thigh downwards and

the helpful instrument that originally extended to the hips is able to be removed piecemeal as the case progresses.

*Group 3.*—In this group are comprised those rarer cases in which after retardation has ceased there is a positive recoupment in growth. My attention was first drawn to this some 15 years since in the case of a boy whose affected foot and leg, during his later and athletic school-days at Rugby, gradually began to catch up its fellow, and since that time I have carefully watched for and have noted similar instances in which recoupment was either partial or even complete. The process seems to be in some way analogous to those common examples in girls in whom one breast will develop some time before the other, and yet the latter when it starts will catch up to its fellow and both will finally be of the same size. What the explanation is in cases of infantile paralysis I must leave to pathologists and content myself with only recording the facts.

Now, all the cases that I have just grouped are cases of ordinary infantile paralysis and they are largely dealt with by authorities on the nervous system, as it is the motor failure that so necessarily calls urgent attention to the disease. Trophic failure, as I have said, is also their usual accompaniment, but it bears no distinct relation to motor incompetency. It is therefore to be expected that there would be a malady in which trophic failure exists alone, and such is indeed so. Only as these cases have no disturbing motor drawbacks they are not taken to the nervous-system specialist, but are usually only to be detected by those who find them as one of the causes of extrinsic lateral curvature of the spine where the pelvis is tilted out of place by the shortness of an undergrown limb. In the *British Medical Journal* of April 6th, 1895, I briefly drew attention to what I took to be an unrecorded fact—that the shortening of a leg was very often "due to a retarded nutrition of one side of the body by what might be called *infantile trophic paresis.*" To this statement I may now further add that I have observed that the trophic hindrances are the same as when this trophic incompetency is conjoined to motor infantile paralysis, and they drop into similar groups.

It is obvious that where trophic paresis causes the shortening of one leg it is unilateral; but I have good grounds for knowing that bilateral cases are not uncommon, although I have usually detected them when examining the legs for something quite different. The evidences are as follows. The lengths of all parts of the body have a distinct relationship well known to sculptors and those who measure the body accurately. If the length of an arm or of a foot be given the lengths of all other parts of the body can be readily estimated; hence if the length of a child's thigh-bone from the great trochanter to the knee is found to be nine inches it is known that the measure from the knee to the heel should be 11 inches. In a normal body the relationships are always exact, but every now and then, generally in examining a case of knock-knee, I have found a gross discrepancy of proportion to exist—as, for example, the legs from knee to heel might be an inch or so less in length than they should be. And, further, in keeping a continuous watch on these cases I have found that the same grouping of hindrance is apparent—that is to say, that sometimes the entire disproportion will disappear during growth, sometimes it will be diminished, and sometimes it will persist.

In concluding these observations I may add a few words on Sir William Gowers's second question respecting his case of elongation of a paralysed leg "clearly occurring at the hip-joint." If Sir William Gowers had not accentuated this latter point I should have been inclined to hold that the case was one of those which I have classed in Group 3. I can only say that I have never observed such a case as his. I have, however (as others may have done), noticed cases of shortening at the hip from injury without disease and have known them to be accidentally diagnosed as paralytic. To give an instance, a girl, eight years of age, was brought to me the other day who two years previously had fallen violently down on her right hip. After the bruise over the trochanter had cleared away nothing wrong was noticed, but a few months later she began to walk queerly. A diagnosis of infantile paralysis was made and a course of massage was ordered which had been excellently carried out for a good many months when the parents brought the child to me for an opinion. The condition was this—the right trochanter was three-eighths of an inch higher than its fellow and not sufficient for dislocation, but the lengths of the bones were similar in both legs and there were no evidences of motor or trophic paralysis. It seemed clear, then, that the original injury had caused some inflammatory softening in the neck of the soft bone of the child and that this had yielded under the weight of the body in walking into a more obtuse angle than its fellow. A skiagraphic inspection confirmed this view. But the result of the excellently conducted massage had been to increase the circumferences of the originally injured limb to over half an inch in excess of its fellow. The case was interesting as it showed beautifully the trophic effects of massage on a limb that was in complete health. Such an experience, if instructive, is rather rare.

Wimpole-street, W.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### CANCRUM ORIS WITH ITS COMMON COMPLICATIONS.

BY R. CAMERON, M.B., CH.B. EDIN.

CANCRUM oris, though fortunately such a rare disease in comparison with other varieties of stomatitis in children, admits of no reasonable mistake in diagnosis. The distinctive macroscopical character of the lesions, the discolouration of the tissues involved, and the fœtid smell from any part of the surface abraided, present a picture typical of the disease as it is described in the text-books. The only two cases which have come under my notice were by a strange coincidence admitted into hospital during the same week, the one having an exceedingly rapid course from start to finish and the other after a mild incidence and rather chronic course (for this affection) becoming suddenly complicated by heart failure.

CASE 1.—The patient was a female child, aged three years. Three weeks before admission she had developed measles. This disease ran a mild course, though the hygienic conditions were apparently of the worst. A week before bringing her the mother noticed a black spot on the *right* side of the mouth, on the inner surface of the cheek. This was still present on admission as a dry adherent slough, from the buccal angle extending outwards for about half an inch. In addition, however, the *left* cheek was now necrosed, putrid, and emphysematous from the lips to the ascending ramus of the jaw, and on the gum above the second upper incisor on the left side was a soft putrid slough. At this point a probe could be inserted and could easily find its way between the gum and the superior maxillary bone. The child was suffering from acute septic poisoning and was in a comatose condition, but there was no evidence of pneumonia, nor was there any lesion of the vulva. All the necrotic tissue was separated with scissors, the surrounding parts were scraped with the sharp spoon, and a little nitric acid was applied on a dry sponge, taking care to prevent this from injuring sound tissue. Within a few hours the remainder of the upper gum became soft and pulpy, and on being removed showed the superior maxilla to be necrosed and irregular and green in colour. The pus, which was plentiful, stained the cottonwool and sponges a bluish-green colour. The child died about 20 hours after admission.

CASE 2.—A woman, aged 46 years, was admitted with two black gangrenous spots on the inner surface of the right cheek; one involved the right angle of the mouth and the adjacent portion of the lower lip, and the other was on the buccal surface opposite the two upper bicuspids, but neither involved the whole thickness of the cheek. The surface was exposed, and under chloroform the affected portions were carefully and completely removed and nitric acid was afterwards applied. On the following day a new area showed itself posteriorly to the site of the original sores. This was again treated in the same way, except that carbolic acid was applied instead of nitric acid. During the following night symptoms of heart failure appeared, and in spite of digitalis, ether injections, and alcohol death resulted. No new focus had appeared, pneumonia was not present, and the pudenda showed no sign of noma.

Absorption of carbolic acid was suggested as the cause of the collapse, but I see no reason to regard that as probable, and the urine which was withdrawn was in no way abnormal. The disease had been slowly progressing for a fortnight before surgical interference. The patient suffered from pulmonary emphysema and was addicted to alcohol.

In a very large proportion of cases of cancrum oris pneumonia or noma, perhaps combined with gangrene of the anus, or pneumonia and noma together, appear as complications. Of 173 cases described in the *American Journal of the Medical Sciences* as occurring in a recent epidemic more than one-fifth had one or other complication or both combined. These complications may accentuate the constitutional effects or may introduce a further antagonist to the patient's power of resisting the disease, but from its position and its virulence and rapidity it must always prove exceedingly dangerous to the life of the individual attacked. The patient is always one with a constitution debilitated by disease or habit of life. With this weakened organism we have the disease in a position where, though the nutrient supply of the tissues is abundant, there is also an abundant absorption. Toxalbumins and bacilli will rapidly pass into the blood, and it is reasonable to suppose that in many cases septic emboli and thrombosis may extend through the veins to the cavernous and other sinuses. In nine bacteriological examinations carried out during the American epidemic a leptothrix was found constantly present, but it is impossible to fulfil all the laws which are required to prove this to be the distinctive organism of the disease. Probably it is a mixed infection, for there are always numerous other bacilli and cocci present, and in one of my cases the colour of the pus was distinctly bluish-green, as it would be under the influence of the bacillus pyocyaneus.

Cardiff.

## A CASE ILLUSTRATING THE EFFECTS OF PRESSURE ON EARLY SYPHILITIC WARTY GROWTHS.

By ARTHUR SHILLITOE, M.B. CANTAB., F.R.C.S. ENG.,
SURGEON TO OUT-PATIENTS TO THE LONDON LOCK HOSPITAL.

AT the October meeting of the Dermatological Society of Great Britain and Ireland I showed a young man with papillomata and condylomata present at the same time on the tongue. He gave the following history. Gonorrhœa was acquired about Christmas, 1900, followed by a chancre on the penis in January, 1901. He was treated privately from January to July and had had no eruption on the body to his knowledge. In June last he had warts on the penis which were destroyed by caustics.

According to Mr. J. Hutchinson, sen., if warts should be found on the penis of a syphilitic subject, the tongue should always be examined for a like condition; and, if present (which they often are), they will be seen to be situated on the posterior third of the dorsum between the arms of the V formed by the circumvallate papillæ—that is to say, on that part of the tongue which does not come in contact with the palate and therefore is not subjected to pressure. While agreeing with this—viz., the formation of papillomata on a part not subject to pressure—one cannot but remember how often in venereal patients (both gonorrhœal and syphilitic) are seen large masses of warts beneath a tight or phimosed prepuce where the pressure must be fairly constant and considerable. On examining my patient I found that he certainly had a few small warts about the corona and on looking at his tongue there were seen several papillomatous growths in the position above indicated. In addition, scattered over the anterior two-thirds of the dorsum and the margins of the organ were eight or 10 large, flat-topped, white condylomata, with sharply defined margins—that is to say, on that part of the tongue which is subject to the intermittent pressure of the palate and teeth. When we consider the positions of condylomata in other parts we find that they, too, occur in situations subject to intermittent pressure—e.g., the natal fold, the inner aspect of the thighs, and the sides of the scrotum.

It seems to me that (1) pressure, as seen in the case of a phimosed prepuce, and (2) no pressure at all, as in the posterior third of the dorsum of the tongue, exert an equal influence in determining the formation of ordinary-looking papillomata; whereas, if the pressure be intermittent, as seen in the anterior two-thirds of the tongue, the inner aspect of the thighs, and the sides of the scrotum, or in the natal fold, then these papillary hypertrophies assume a condylomatous form.

In conclusion, my patient told me that his tongue was in much the same condition last July and that it yielded so rapidly to treatment that he took no further medicine, until I saw him at the hospital early in October, when the lesions speedily disappeared under mercury.

For permission to publish the above case I am indebted to the Dermatological Society of Great Britain and Ireland.

Frederick-place, E.C.

## NOTE ON A CASE OF CONGENITAL ATROPHY OF THE RIGHT KIDNEY.

By R. NIVEN, M.B., CH.B. GLASG.,
ASSISTANT MEDICAL OFFICER, BETHNALL HOUSE ASYLUM, LONDON, N.E.

A MAN, aged 57 years, died at Bethnall House Asylum on Nov. 9th, 1901, from asthenia consequent on general paralysis of the insane, complicated by hypostatic engorgement of the lungs. At the necropsy no trace of the right kidney could at first be discovered. On removing the right suprarenal capsule, however, a small reddish mass of about the size of a scarlet-runner bean was discovered embedded in the surrounding areolar tissue and close to the lower margin of that organ. The connexions with vessels and ureter were thus unfortunately severed before a careful dissection was made. A small vessel, probably a vein, was found emerging from the inner border of the reddish body. A very small artery, probably the right renal, came off the abdominal aorta opposite to, and on a level with, the left renal artery. On dissection, a fine tube was found following the normal course of the ureter and was traced downwards to the bladder which it entered at a point on the right side of that organ corresponding to the point of entry of the left ureter on the other side. A stout hairpin was with difficulty passed through a small surface at the right posterior angle of the trigonum vesicæ, and it travelled along the tube for about two inches. On microscopical examination the reddish mass embedded in fat had the structure of very atrophied kidney substance. A few tubules were seen to be scattered through an abundance of dense fibrous tissue. They were lined with flattened epithelium and were filled with retained secretion. The vessels in the dense fibrous stroma were very thick-walled. The right kidney exhibited some degree of compensatory hypertrophy. Its position and relations were normal. The organ weighed seven ounces, it was of healthy colour and apparently normal on section, and the capsule stripped easily. Microscopical examination showed the kidney to be practically healthy. There were small patches of fibrous tissue here and there, but the glomeruli were not degenerated and the convoluted tubules were not dilated. The urine was neither measured nor examined during life, as the man was during the period of his residence here indifferent to the calls of nature and passed urine and fæces under him. Throughout life there were no symptoms indicating defect in the urinary organs.

For permission to publish this case I am indebted to the kindness of Dr. J. Kennedy Will, medical superintendent of the Bethnall House Asylum.

Cambridge-road, N.E.

## A NOTE ON A CASE OF PURPURA.

By T. EDWARD SANDALL, M.B., B.C. CANTAB.

A WELL-MARKED case of purpura is perhaps sufficiently rarely met with in general practice as to warrant a brief report. The following case is of interest on account of the peculiarity and duration of the premonitory symptoms which completely puzzled me at the time, and until I saw the characteristic eruption on the ninth day of the illness I had no idea that I was dealing with a simple case of purpura.

The patient was a girl, aged 15 years, who had always enjoyed good health but had not yet menstruated. I first saw her on Nov. 11th, 1901, when she complained of acute pain in the calf of the leg and in the popliteal space on both sides which, having begun the day before, became so acute that she was quite unable to walk and she had to crawl upstairs to bed on her hands and knees. There was no other symptom; the temperature was normal, the appetite was good,

the tongue was clean, and the bowels were regular. On examination there was no abnormal appearance of the skin and no swelling or œdema, but there was acute tenderness on pressure on the calf of the leg and in the popliteal space. Lying perfectly still the patient was free from pain, but any attempt to flex the leg was acutely painful. She was kept in bed, hot fomentations were applied to the parts affected, and a mild aperient was given, but no other medicinal treatment was employed as I saw no indication for it. Next day the patient was better, feeling quite well in herself and complaining much less of the pain and tenderness. On the 13th she declared herself well again and got up for a few hours in the afternoon, but this appeared to cause a return of the pain and on the 14th it was worse, especially in the right leg; the right arm and elbow were now affected and there was some headache. Although the temperature remained normal, the tongue clean, and the joints free from swelling, I thought that the symptoms pointed to subacute rheumatism. The patient was therefore kept in bed, the affected parts were wrapped in flannel, and a salicylate of soda mixture was given. During the night of the 14th the patient vomited several times and again on the morning of the 15th, when the tongue was slightly furred and the headache continued, but the pain in the limbs had practically subsided. On the 16th the patient declared herself to be quite well again, and on the 17th treatment was discontinued, and she returned to her duties as a domestic servant. About 10 P.M. on the 19th I was sent for and I found the patient in bed, complaining once more of acute pain in the arms and legs which had begun in the afternoon. The skin was covered with a purpuric eruption, the spots varying from the size of a pin's head to about one-eighth of an inch in diameter or larger. They were most abundant on the limbs and were absent from the face. I was informed that a slight rash had appeared the day before and had faded again. The temperature was 102° F. There were slight œdema of the legs and feet and some effusion into the ankle-joints, particularly the right. On the 20th a few fresh spots had developed, but the general rash was fading; the spots were dull and purple in colour. The pain was less severe and the œdema was less marked. On the 21st the patient felt quite well; there was no longer any œdema or effusion into the joints, there was no pain or discomfort, and the rash seemed to be fading slowly. Improvement continued for the next two days, when the patient left for her own home, and passed out of my observation.

On the pathology of purpura, which is a difficult subject, I do not propose to touch, but I desire to call attention to one or two points as to causation and diagnosis. In the first place, had the non-appearance of the menstrual function any effect in the causation of the attack? There was absolutely no cause, as generally given in our text-books, and I am unable to refer to literature on the subject. The patient was a strong, healthy girl, taking plenty of outdoor exercise, and she had never had any serious illness. The diagnosis of purpura is easy enough with the rash before one's eyes, but the symptoms preceding the eruption were very puzzling and, I think, unusual. What was the cause of the acute pain and tenderness in the limbs? If the term "rheumatism" will cover these symptoms and if the eruption may be termed "purpura rheumatica," I still would urge that there was not rheumatism in the ordinary acceptation of the term. And what were the structures affected? Was the pain neuralgic or muscular? Lastly, I would call attention to the temperature, which remained normal during the whole illness except for a few hours at the onset of the eruption, when it reached 102°.

Alford, Lincolnshire.

BRISTOL HOSPITAL SUNDAY FUND.—A meeting of the committee of the Bristol Hospital Sunday Fund was held on Dec. 12th. The Lord Mayor gave an account of the progress of the fund, showing that in 1898 there were 92 collections at places of worship which realised £1128, whereas in 1901 there were 251 collections and £1772 were raised. Grants of £1711 were made to the local medical charities, which included the Royal Infirmary, £704; the General Hospital, £591; the Children's Hospital, £218; and the Eye Hospital, £105. It was decided that the last Sunday in January next should be observed as Hospital Sunday.

# A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

**Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.**—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## NOTTINGHAM GENERAL HOSPITAL.

### A CASE OF TRAUMATIC ANEURYSM OF THE VERTEBRAL ARTERY; FAILURE OF LIGATURE ON THE PROXIMAL SIDE; DISTAL LIGATURE; EXCISION OF THE SAC; PLUGGING; RECOVERY.

(Under the care of Mr. A. R. ANDERSON.)

THE treatment that is theoretically correct for a traumatic aneurysm is identical with that for a recent wound of an artery, that is, ligature on both sides of the wound; and the only exceptions that are admissible are cases where it is impossible or unadvisable to apply these two ligatures. It is generally acknowledged that the internal carotid and its branches form the chief exception to the rule and that with these proximal ligature may prove sufficient, but the vertebral artery from its depth might fairly claim to be also considered unsuited for the usual treatment. The circle of Willis, however, supplies the distal portion of the vessel so freely with blood that it must be acknowledged that ligature on both sides of the wound, or on both sides of the traumatic aneurysm, is imperatively necessary. The following report describes the successful treatment of a most troublesome traumatic aneurysm of the vertebral artery immediately below the third cervical vertebra.

A young woman, aged 21 years, was taken to the Nottingham General Hospital on Sept. 4th, 1900, having been stabbed in the neck a short time previously. The injury was inflicted by the small blade of a penknife used for nails and having only a short portion of blade at the end. A small wound, one-third of an inch long, was found over the posterior border of the sterno-mastoid on the left side, about the level of the upper border of the thyroid cartilage; its direction was forwards and inwards. There had been profuse bleeding, arterial in character, and the patient was pale and faint from loss of blood on her arrival. It had then ceased. A pad was placed over the small wound which healed readily and gave no further trouble, and at the end of three weeks she went out apparently well.

On Jan. 2nd, 1901, the patient was readmitted to the hospital with a pulsating swelling in the neck, of about the size and shape of a duck's egg, having its centre opposite the wound. Its upper limit extended as high as the lobule of the ear and its lower limit to within two inches of the clavicle. The pulsation was markedly distensile and a loud bruit could be heard on auscultation. No information could be gained by digital compression of the common carotid artery, the bulk of the tumour interfering with this, and any deep pressure caused the patient much distress. From the situation of the aneurysm and the direction of the wound it was thought probable that the injured vessel was the carotid artery or one of its branches, and on Jan. 4th Mr. Anderson made an incision over the course of the common carotid artery and exposed this vessel, and was somewhat surprised to find that compression of it produced no effect whatever on the pulsation in the aneurysmal sac. It was then concluded that the vessel involved must be the vertebral artery, so the incision was prolonged downwards and this vessel was exposed in the interval between the longus colli and the scalenus anticus, just below its entry into the foramen in the transverse process of the sixth cervical vertebra. Compression of the vessel here immediately and completely arrested the pulsation in the sac. The vessel was then tied with a silk ligature and the wound was closed.

The operation was followed by contraction of the pupil of the corresponding side, due to disturbance of the sympathetic filaments in relation with the artery. In the absence of other evidence this affords proof that the operator had ligated the vertebral artery, and not the inferior thyroid

artery, which lies in front of, and may be mistaken for, it. For a few days all went on well and the wound healed by first intention. Within a fortnight, however, it was seen that the operation had failed to cure the disease, as the aneurysm was pulsating again, with but little diminution in its expansile beat, the failure being no doubt in great measure due to the free anastomosis through the circle of Willis.

On March 14th Mr. Anderson operated again, making a long incision over the sac, which was dissected round and isolated as much as possible. His original intention was to endeavour to chisel away the transverse processes and to find and to tie both ends of the wounded vessel. This obviously could not be done without the removal of the sac, which lay over them from the axis to the sixth cervical vertebra. The sac was therefore incised preparatory to this, but there followed such a rush of arterial blood as to necessitate its continuous compression and to put any deliberate operative procedures in the vicinity of its neck out of the question. The hæmorrhage was readily controlled by pressure of the finger within the sac, which was undertaken by Dr. J. Milne, the house surgeon, and no more blood was lost from this source. The incision was then prolonged upwards and backwards, in a curved direction towards the occiput, and after the trapezius, sterno-mastoid, splenius capitis, and complexus muscles had been divided near their attachments the distal part of the vertebral artery was tied in the sub-occipital triangle, just where it enters the groove behind the transverse process of the atlas. The difficulties were considerable. The upper border of the sac came within the area of the operation, and although drawn down as much as possible with a retractor the deeper dissection had practically to be carried on behind it. Another trouble was from unnamed, but considerably dilated, arterial branches of which a regular plexus was encountered. After the ligature had been placed round the vessel Dr. Milne removed the pressure which during this time he had been keeping on the mouth of the sac and the operator was disappointed to find that even then the bleeding was not completely arrested. It was, however, quite different from what it had been before the distal ligature. There was now no rush or pumping of blood, but still a distinct welling up of arterial blood from the neck of the sac. The sac was then cut away. Two courses now remained—either to remove the transverse processes and to search for, and to tie the ends of, the vessel, or to plug the neck of the sac, which lay between the transverse processes of the third and fourth cervical vertebræ, at which spot the vessel had been wounded. Although the former course was surgically correct various considerations induced Mr. Anderson to employ the latter. In the first place the patient had lost a good deal of blood and was already beginning to feel the effects of a prolonged and difficult operation which it was desirable to bring to as speedy a termination as possible. Further, it was apparent that even moderate pressure controlled the blood now flowing which had no force behind it. The third point which induced him to resort to pressure was obtained from the anatomy of the parts involved. The vertebral artery in its course through the neck gives off numerous lateral branches which pass out between the transverse processes and form a plexus, anastomising above with the princeps cervicis from the occipital artery and below with the profunda cervicis from the superior intercostal artery. This was now the only source left from which blood could be supplied to the interior of the sac. It forms the only collateral circulation after ligature of the vertebral artery, excluding the direct route through the circle of Willis. These vessels had no doubt become enlarged as the result of the ligature of the vessel at the root of the neck, but making allowance for this it was considered very improbable that they could furnish a supply of blood which would not be arrested by such direct pressure as could now be employed. The site of the neck of the sac was packed with strips of sterilised lint dusted with iodoform and the wound was closed except at this spot. The plug was left in position for a week, at the end of which time it was removed, and the cavity was lightly packed with iodoform gauze. The wound, except at this spot, healed by first intention and the patient made an uninterrupted recovery. The movements of the neck and shoulder are highly satisfactory, those of the latter being practically unimpaired.

*Remarks by* Mr. ANDERSON.—Aneurysm of the vertebral artery in the neck, traumatic or other, is of so rare occurrence that it may be looked on as a clinical curiosity. As there is, however, some information to be obtained from this case which might be helpful in treating a similar one I have thought well to record it. Thus it is evident that ligature of the vertebral artery on the proximal side cannot be relied on to arrest bleeding from a wound of the vessel or to cure a traumatic aneurysm, although it is possible that in another case it might be successfully employed. Literature of wounds of the vertebral artery is scanty, but a great deal has been written concerning wounds of the branches of the other great vessel of the neck, the common carotid artery. Some years back I collected and tabulated in a paper read before the Nottingham Medico-Chirurgical Society 116 cases in which the common carotid artery had been tied for hæmorrhage from one of its divisions, or branches thereof, and of this number 18 died from recurrent hæmorrhage from the seat of injury. Several of these were instances of wound of the internal carotid artery, which is a larger vessel than the vertebral and has a very direct communication at the base of the skull with the vessel of the opposite side. Judging, therefore, by analogy, the percentage of failures in the case of the vertebral artery should be less than that of the carotid. I insisted, in the paper referred to, on the importance of using every endeavour (especially in wounds of the internal carotid artery from the mouth), to find and to tie both ends of the injured vessel, in accordance with the recognised surgical axiom which applies to arteries in other parts of the body, and I should have been glad to apply this principle in the case narrated but found it impossible to do so under the existing conditions.

Compression of the carotid artery as a means of diagnosis was not obtainable owing to the bulk of the tumour and the suffering which it occasioned, and when I began the first operation I thought that the aneurysm was probably connected with one of the main branches of the common carotid artery, and my intention was to arrest the flow of blood through it by temporary compression of the common trunk, then to excise the sac, and to tie the ends of the communicating vessel. This was impracticable on finding that the vessel involved was the vertebral artery. After ligating it at the root of the neck the flow of blood into the sac was practically stopped, as evidenced by the cessation of pulsation and the shrinkage in its bulk. It would at that time have been possible to excise the sac, to cut away the transverse processes, and to find and to tie both ends of the vessel at the seat of the lesion. On the other hand, the result at the moment appeared to be highly satisfactory, and the getting at the wounded vessel would have involved a somewhat serious and difficult operation. Further, there seemed to be a reasonable prospect of success afforded by the knowledge that ligature of the common carotid artery has been frequently (although by no means invariably) successful for wounds of the internal carotid artery and that the anatomical conditions alluded to above were all in favour of the vertebral artery. The development of the collateral circulation in the month that intervened between the two operations, with the consequent number of unnamed arteries of respectable size that were met with during the operation, was quite remarkable and is worth more than a passing notice.

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## GOVERNMENT CIVIL HOSPITAL, HONG-KONG.

### A CASE OF RUPTURE OF THE INTESTINE; ABSENCE OF SYMPTOMS FOR SOME TIME AFTER.

(Under the care of Mr. J. BELL.)

THERE are two points in connexion with the following case which are of importance. In the first place, it will be noticed that the defence advances the statement that spontaneous rupture of bowel can occur. The passage on which the defendant's counsel relied was taken from a work by Dr. Francis Ogston.[1] The exact words are as follows: "It is to be kept in view by the medical jurist that in some cases death happens very suddenly from a spontaneous rupture of some part of the bowels, even without any previous disease." Dr. Ogston was a very careful observer and therefore great weight may be attached to what he has said, and doubtlessly the statement quoted above was founded on some case or cases he had met with; but it must be borne in mind that the observations on which this statement

[1] Medical Jurisprudence, 1878, p. 488.

is based were made many years ago, and our improved methods of observation might show the presence of previous disease where formerly it would not have been noticed. In any case, the character of the rupture and its situation must all be taken into account in forming an opinion on its etiology. The second point that the case suggests is the length of time which could elapse after such a rupture without the appearance of symptoms. In the defence it was suggested that 36 hours might have passed without any symptoms appearing. This is certainly impossible. If symptoms do not occur at once it can only be because that part of the bowel chances to be empty at the time of rupture; but as soon as any contents pass into it from above extravasation must occur with its attendant signs and symptoms. Thus these might possibly be delayed for a few hours, but not for very long.

Whilst being arrested an adult Chinaman was kicked—so it was alleged by certain witnesses—by the native policeman who was making the arrest at 3 P.M. on July 24th. The man walked to the police-station and made no complaint until 5 P.M. when he said that he was in pain. He was removed by launch to the Government Civil Hospital, Hong-Kong, and on admission was in no pain or collapse. At 1 A.M. on the 25th he was in great pain, which seemed to be paroxysmal and was referred to the whole of the abdomen. His pulse was good and no dulness could be detected in either flank. At 5 A.M.—14 hours after the alleged assault—collapse set in suddenly and he died at 9 A.M.

*Necropsy.*—At the post-mortem examination no external bruise or extravasation into the muscles could be seen. The small intestine about one inch above, and to the left of, the umbilicus was torn almost completely across. The peritoneum was intensely congested, but no lymph was thrown out. Bile and intestinal fluid were found in the abdominal cavity, but no food was seen.

*Remarks by* MR. BELL.—The defendant's barrister quoted Ogston as saying that medical jurists should remember that it is possible to get a rupture of a perfectly healthy gut without any cause whatever. This view I naturally declined to agree to, and I think that in any future edition of this work some explanation should be given or cases cited to prove this fairy tale. It was also set up in defence that the rupture had occurred in a fight 47 hours previously to death. This I declined to agree to in view of the extent of the peritonitis, which I took to be 12 or 18 hours old. The supposed assailant was acquitted by the jury.

# Medical Societies.

## PATHOLOGICAL SOCIETY OF LONDON.

### *Cortical Localisation, with Special Reference to the Higher Apes.*

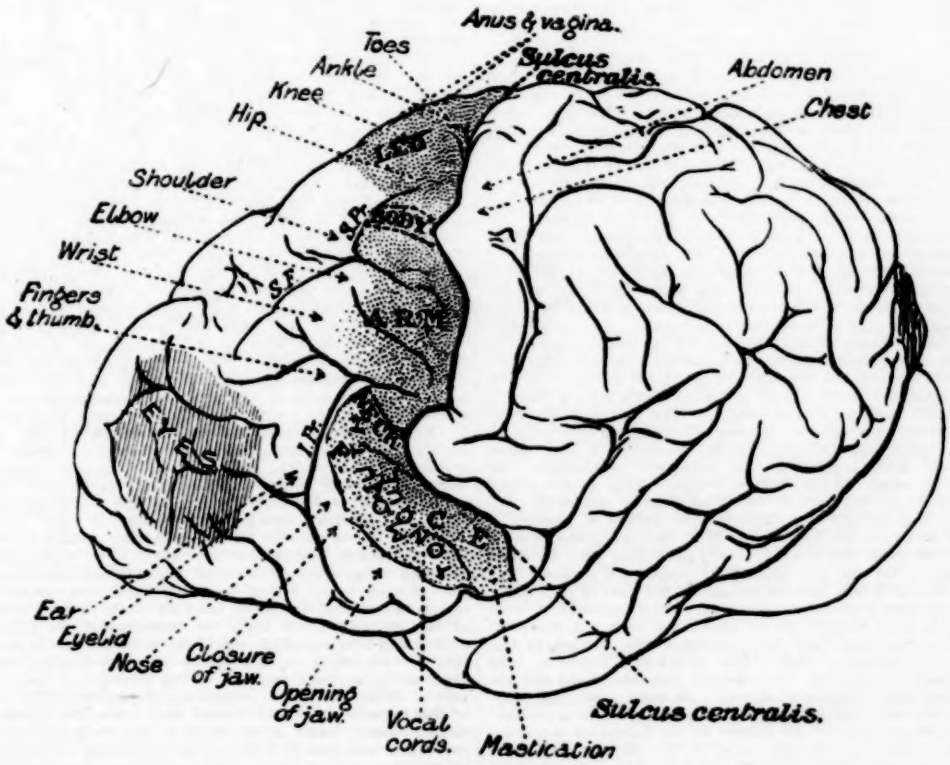
A MEETING of this society was held on Dec. 17th, Mr. W. WATSON CHEYNE, the President, being in the chair.

Professor C. S. SHERRINGTON read a paper on Cortical Localisation, with Special Reference to the Higher Apes. After referring to the influence which the work of Hughlings Jackson, Hitzig, Ferrier, and others had on the conception of the cortical centres, he said that considering the complex connexions which existed with the longer neurons it was remarkable that such accurate results could be obtained by methods which were comparatively rough. Eleven years ago Beevor and Horsley published the results of their experiments on the orang-outang and that had been the only anthropoid ape experimented on up to the present time. The brain in the anthropoid ape was at its highest development, except in man. The gorilla had the highest development, the chimpanzee was next, and this was followed by the orang-outang. Two species of chimpanzee had been experimented upon. The chief points of difference which had been observed with regard to the limits of the excitable area were that no excitable area could be found behind the Rolandic fissure and that the anterior boundary could not be defined by any definite sulcus. The anterior margin of the excitable area was very variable in individual apes. The position and size of the fissures were also liable to extreme variation—in fact, in comparing various specimens of brains hardly any two were exactly similar. This frequency of individual variation was so great that a preserved brain could not be used as a guide to the localisation of centres in experimental work, and the function of the centre had to be determined by direct stimulation. The fissures of the cortex did not bear any relation to the boundary of function of the cortical centres, and the asymmetry in the sulci was often so marked that the topographical relation of the centres on two sides of the brain could not be determined thereby. If it were desired to excise the hand area the only exact method of localising it would be by electrical stimulation. It had been stated that the cortex of the ape responded less readily to electrical stimulation than the cortex of the lower monkeys, but in the experiments which had been performed this had not been found to be the case. The same strength of current which would produce a movement on stimulation of the cortex of a cat or of a bonnet monkey would also produce a similar movement in the chimpanzee. It had been stated by Beevor and Horsley that epilepsy could not be provoked by stimulation of the cortex; that statement was probably correct to some extent, but, on the other hand, epileptic discharges could be produced in certain individuals of the anthropoid apes. A chart was then shown indicating the position of the various centres (see figure). In the tongue area stimulation could not produce protrusion although almost all other movements could be produced. In the area for closing of the eye stimulation caused the eye on the opposite side to be firmly closed while that on the same side was less forcibly closed. An undescribed area representing movements of the trunk muscles had been mapped out between the leg and arm area and also an area concerned in the movement of the perineal muscles. No confirmation could be obtained of the area situated below the thumb centre and described by Beevor and Horsley as giving rise to movements of the head and eyes to the opposite side. The method that had been used in these experiments had been to place one electrode on the cortex, the other being attached as a bracelet to the wrist. The point used for stimulation of the cortex was a fine platinum point on a spring, so that undue pressure on the cortex was avoided. In not one of the experiments performed had any movement been obtained by stimulation behind the Rolandic fissure. In a chimpanzee the hand area was excised and a localised monoplegia resulted. There was no affection of the face or leg. The parts paralysed were the fingers, thumb, wrist, and shoulder, while the elbow escaped. This paralysis only lasted a week, and after a month the ape was able to feed itself with the formerly paralysed hand. A second operation was performed and on stimulation in the anterior corner of the old wound some movements of the hand occurred. This part of the cortex was removed but no further paralysis resulted from this excision, and two weeks later the ape was killed. On examination by Marchi's method degeneration was well marked in the ventral pyramidal tract, in the crossed pyramidal tract, and also in the uncrossed pyramidal tract, and this degeneration could be traced down to the upper lumbar region. In another experiment in which the leg area was removed no degeneration could be found in the ventral pyramidal tract. In a third experiment in which a large lesion had been made behind the Rolandic fissure no paralysis of any kind resulted and no degeneration of the spinal cord existed. In a fourth experiment with a lesion also behind the Rolandic fissure there was no descending degeneration. The gorilla showed the same general arrangement of centres as the chimpanzee. As had been pointed out by Beevor and Horsley the size of the motor cortex in comparison with the whole cortex was relatively smaller in the higher apes than in the lower animals, and since the area of excitable cortex was found to be smaller in the present series of experiments than in those of Beevor and Horsley this difference in proportion was yet more marked.

Dr. F. W. MOTT congratulated Professor Sherrington on his magnificent work which would be of great practical importance. He said that he had performed a necropsy on a patient who had suffered from a monoplegia of the arm and it was found that only a portion of the ascending frontal convolution was atrophied, such a fact tending to confirm the observation of Professor Sherrington that the excitable cortex lay in front of the Rolandic fissure. One other point seemed also to be in favour of this observation—viz., that the large Betz cells were all situated in the ascending frontal convolutions. He asked if Professor Sherrington had been able to trace the pyramidal fibres into the grey matter of the anterior horn, for Professor Schäffer had held that the pyramidal fibres passed into Clarke's column. He asked also whether

any fibres could be traced from the arm area to the occipital region, since such might be expected in the apes which had assumed the erect position. He had himself been able to produce movements of the head and eyes by stimulation in the region of the calcarine fissure.

region, and therefore this case could not be used as a definite proof of the point referred to by Dr. Mott. With regard to Dr. Beevor's observations, he said that his experiments fully confirmed Beevor's and Horsley's observations with regard to the position of the shoulder area. He did not think that




The brain of a chimpanzee.

Dr. C. E. BEEVOR said that the chief points in which the experiments of Professor Sherrington did not agree with those of Mr. Horsley and himself were with regard to the position of the shoulder, since in Professor Sherrington's experiments the shoulder was placed near the face centre, whereas in Mr. Horsley and his (Dr. Beevor's) experiments the hand was near the face centre. He said that some movements of the face and thumb had been obtained from stimulation behind the Rolandic fissure, and he thought that the difference in results might be accounted for by the age of the apes, since their ape was only two and a half years old.

Mr. C. A. BALLANCE said that he had performed some excitation experiments on the bonnet and rhesus monkeys, and had found that both the ascending frontal and ascending parietal were excitable. He had excised portions of the cortex corresponding to movements of the thumb, but had never been able to produce permanent paralysis. In one monkey he had by stimulation of the centre for the big toe on one side obtained movements of both toes, but on stimulation of the area in the opposite hemisphere no movement resulted, seeming to show that the big toes of the individual monkey were represented on one side only.

Dr. J. PURVES STEWART said that he had had the opportunity of stimulating the motor cortex in man in order to determine the situation of the centre for movements of the foot in a man who suffered from Jacksonian epilepsy, and he had been surprised to find that he could only obtain movement from stimulation of the cortex in front of the fissure of Rolando.

Professor SHERRINGTON, in reply, said that the degeneration of the pyramidal fibres could be traced into the grey matter of the anterior horns, but that in this case there was atrophy of the cells of the anterior horn in the brachial region. The age of the apes made any appreciable difference, since he had used an ape five months old which gave results exactly similar to those which had been obtained in adult apes.

## CLINICAL SOCIETY OF LONDON.

*The Association of Moveable Kidney on the Right Side with Symptoms of Hepatic Disturbance.—The Theory of Compensation in Disease of the Mitral Valve.*

A MEETING of this society was held on Dec. 13th, Mr. HOWARD MARSH, the President, being in the chair.

Dr. S. H. HABERSHON read a paper on the Association of Moveable Kidney on the Right Side with Symptoms of Hepatic Disturbance. In introducing this subject he defined the term "hepatic diathesis," and instanced three classes of patients in whom functional hepatic symptoms were liable to be set up—firstly, those of definite biliary susceptibility; secondly, those in whom biliousness was induced by circumstances well within their control; and thirdly, those in whom the hepatic symptoms depended on a ptosis of the kidney or the liver. The object of the paper was to emphasise the medical aspect of the condition known as moveable kidney and to describe certain groups of biliary symptoms which were prominent. The cases of moveable kidney occurred chiefly in women, and statistics were given from the writings of Glénard, Landau, Mathieu, and others to show that from 20 to 28 per cent. of all dyspeptic women possessed a moveable kidney. The causes, diagnosis, and symptoms were then narrated, and among the difficulties that occurred in the recognition of the condition the variability of position and

the simulation of an enlarged gall-bladder, of Riedel's lobe (the floating lobe) of the liver, and of certain renal appendicular conditions were cited. The mobility occurred in an enormous proportion of the cases where the moveable kidney was on the right side. The symptoms of moveable kidney were subjective and visceral. Among the latter class the left kidney was more prone to produce gastric than hepatic symptoms. Hepatic conditions occurred in cases of moveable kidney of the right side. They were defined in three groups: (1) general symptoms of severe biliousness; (2) attacks of colic simulating true biliary colic from the passage of gall-stones, and probably identical with Dietl's crises; and (3) attacks of jaundice, three cases reported by Maclagan being quoted. The cause of these hepatic disturbances was next discussed and it was suggested that the symptoms might be due either to pressure on the duodenum or common bile-duct, or to traction on the middle portion of the duodenum, or to reflex irritation of the pneumogastric nerve, the two latter being considered the most probable causes. Dr. Habershon divided cases of hepatic symptoms into three classes from the point of view of their symptomatology: (1) cases of uncomplicated ptosis of the right kidney; (2) cases in which the renal condition was accompanied by a coincident ptosis of the liver; and (3) cases in which the renal ptosis was part of a general enteroptosis. In the slighter degrees of ptosis of the right kidney the hepatic symptoms were often paramount and the following classes of symptoms should lead to the suspicion of moveable kidney. 1. The intractability of the hepatic condition which did not yield to ordinary methods of treatment. 2. The fact that the symptoms were produced or aggravated by shaking or exertion in any form, this being entirely contrary to the experience with regard to an ordinary biliousness, not due to ptosis of the kidney. Eight cases were reported to illustrate the various forms of hepatic symptoms and the relief afforded by replacing the kidney in position.—Mr. R. CLEMENT LUCAS said that the symptoms referred to were those which were usually associated with moveable kidney. He did not think that much good resulted from the use of a belt, and he mentioned the case of an athletic young man who suffered from very severe attacks of what was at first thought to be gall-stone colic. A moveable kidney was found and this condition was treated at first by an abdominal belt. The symptoms, however, only became exaggerated. The kidney was then fixed and the patient was completely relieved. In some cases gall-stones and moveable kidney might be associated. He considered that the relation of the kidney to the duodenum was much more likely to be the cause of the hepatic pain than was any referred pain through the branches of the pneumogastric nerve.—Dr. T. J. MACLAGAN said that there were many cases of moveable kidney which gave rise to no symptoms and that in these cases there should be no interference. Moveable kidney was almost always situated on the right side, and if the left kidney was moveable it seldom gave rise to any symptoms. The hepatic symptoms, he believed, were due to the impinging of the right kidney against the liver. He considered that belts were of little service, but that rest was often most beneficial, especially in thin females, although it had recently been stated that it was of little value.—Dr. HABERSHON replied.

Dr. T. STACEY WILSON read a paper on the Theory of Compensation in Incompetence and Stenosis of the Mitral Valve, and he formulated his views in the following propositions. *In mitral incompetence.*—Proposition 1.—The process of compensation necessitated dilatation of the cavity of the left ventricle as well as hypertrophy of its walls and the amount of dilatation in the compensated heart was directly proportional to the amount of blood which regurgitated into the auricle at each beat of the heart. As mitral incompetence involved the leakage back into the auricle of a certain part of the contents of the ventricle at each beat of the heart it therefore followed that in order to compensate for this leakage and to allow of a normal amount being thrown into the aorta at each beat the ventricle must enlarge so as to hold both the normal amount and that which would escape back into the auricle, and it must thicken its walls so as to be able to move this additional volume of blood. The theory of the enlargement of the ventricular cavity was, he said, as follows. On the first occurrence of regurgitation through the mitral valve a progressive over-distension of the auricle would theoretically result from the leakage of blood back into that chamber. As soon, however, as the size of the auricle exceeded that of the ventricle the latter would during its expansion be drawing towards itself more blood than it could hold, and the momentum of the blood which could not find entrance would tend to dilate the cavity of the ventricle. In that way the ventricle would be dilated by its own aspiratory force until its size was comparable to that of the auricle. That would not occur until the ventricle was large enough to hold the full amount of the leakage in addition to its normal contents. Proposition 2.—The dilatation and hypertrophy which could compensate for the defective working of the left ventricle during systole would, according to this theory, also relieve the auricle from embarrassment during diastole by ensuring the proper filling of the ventricle. For since the enlarged ventricle was able to accommodate all the regurgitated blood in addition to its normal contents it followed that it would be as easy for the abnormal amount of blood to enter the abnormally large ventricle as for the normal amount to enter the normal ventricle. Also the increased muscularity of the enlarged ventricle would ensure the slight addition to the aspiratory force which was required to draw the larger amount into the ventricle. Proposition 3.—Therefore, by the time the expansion of the ventricle had ceased the auricle would have been relieved of all the regurgitated blood and only the normal amount would remain to be dealt with by it. Proposition 4.—Therefore, in fully-compensated mitral regurgitation no extra work would be thrown upon the left auricle, and there would be no embarrassment of the pulmonary circulation and no accentuation of the pulmonary second sound. Proposition 5.—Neither would there be any dilatation of the left auricle unless the regurgitation were extreme. Since the systole of the auricle and of the ventricle together occupied one-half of the cardiac cycle, it followed that only one-half of the full volume of blood would normally enter the auricle during that portion of the cycle. Therefore, there would be room in the auricle during the ventricular systole for any amount of regurgitated blood up to one-half of the total quantity put into circulation at each beat. If, on the other hand, the amount of regurgitation were to exceed one-half of the normal output of the ventricle there might be dilatation of the auricle, even when compensation was fully established. Proposition 6.—According to this theory of compensation there ought to be a slight increase in the loudness of the aortic part of the second sound, because the greater expansile force of the hypertrophied and dilated ventricle would induce a more powerful recoil of the blood in the aorta and would result in a more powerful closing and stretching of the aortic valves than in the case of the normally-acting ventricle. *In mitral stenosis.*—According to this theory the left ventricle increased its aspiratory power in order to facilitate the entry of blood through the narrowed orifice and so established compensation. This was brought about as follows. Proposition 7.—In mitral stenosis the left ventricle contracted with greater force than normal in order that the rebound, both muscular and elastic, might be correspondingly increased. An evidence of that was the increased loudness of the first sound which occurred in mitral stenosis. Temporary embarrassment of the circulation was accompanied by an increase, often excessive, in the loudness of the first sound, which lessened again as the circulation improved. This increase in the force of the ventricular contraction was also suggested by the occurrence of the hypertrophy of the left ventricle which was not infrequently noticed in mitral stenosis. Proposition 8.—The left ventricle altered its beat. Its contraction terminated with greater suddenness and force than normal. This concentration of ventricular effort at the termination of the systole had the effect of further increasing the force of the ventricular recoil which immediately followed the systole, lasting as it did only one-tenth of a second. This was the explanation of the sharp and loud end of the first sound which was so characteristic of mitral stenosis. The characteristic cardiograms of mitral stenosis often showed a more sudden recession of the heart from the chest-wall at the end of the systole than in the normally-beating heart. Proposition 9.—As a result of that additional aspiration the auricle could be relieved of much, if not all, of the additional work which the narrowness of the mitral valve entailed. Very frequently an absence of dilatation of the left auricle in mitral stenosis where compensation was perfect at the time of death would be found. Proposition 10.—Therefore, in compensated mitral stenosis if the narrowing were not very excessive no extra work was thrown upon the right

side of the heart and there was no engorgement of the lungs. As evidence of this the pulmonary second sound of normal loudness was found even in cases of severe mitral stenosis. It was found, too, that the accentuation of the pulmonary second sound, which was characteristic of failing compensation, gradually lessened as compensation improved. No clinical evidences of pulmonary congestion or engorgement might be found even in severe cases of mitral stenosis. Proposition 11.—Some increase in the loudness of the aortic second sound, apart from that due to increased arterial pressure, might also be expected because of the increased ventricular aspiration, as suggested in the sixth proposition.—Dr. PERCY KIDD said that the paper was one which it was difficult to discuss without careful consideration.—Dr. F. W. F. ROSS said that Professor Rutherford had been one of the earliest teachers of the aspirating theory of the action of the heart. He considered that the circular fibres of the heart were principally concerned with propulsion of the blood.—Dr. J. KINGSTON FOWLER said that he did not agree with Dr. Wilson's view as to the causation of the accentuation of the first sound in mitral stenosis. He always believed that in the normal heart the valves floated slowly up as the blood entered the ventricles and shut quietly, whereas in the heart with mitral stenosis the valves were thickened and instead of floating slowly up were brought sharply together. The margins of the mitral valve could often be shown to be faceted.

## OPHTHALMOLOGICAL SOCIETY.

*Exhibition of Cases and Specimens.*

A CLINICAL meeting of this society was held on Dec. 12th, Dr. DAVID LITTLE, the President, being in the chair.

Mr. H. WORK DODD showed a peculiar New Growth in the Orbit. The patient was a woman, aged 39 years, who was seen in October, 1901, with the history that 11 years ago she had a small growth of the upper lid which in four years had attained to the size of a pea. This was then removed. Two years later a lump appeared and this broke down and healed several times and had attained to the size of a filbert, being situated at the outer side of the orbit. It was adherent to the bone. The eye was pushed to the nasal side and there was an enlarged gland in front of the ear. The whole contents of the orbit were removed and the bone to which the growth was adherent was scraped. The lacrymal gland was normal. The pathologist's report stated that it was an unusual form of carcinoma allied to rodent ulcer. As much difference of opinion was expressed on the sections the growth was referred to a pathological committee.

Mr. HENRY E. JULER showed the following cases: (1) A Congenital Case of Retinal Pigmentation situated towards the Periphery of the Fundus; (2) Peculiar Macular Changes due to Choroido-retinitis; and (3) a case of Congenital Aniridia. In this latter case the mother and daughter were affected. The mother came to Mr. Juler stating that her sight had always been defective and when seen one eye was quite blind from glaucoma. After removal it was found on dissection that there was a ring of iris at the extreme periphery which had caused blocking of the angle. The lens was partially opaque. The daughter had come under the care of Dr. R. D. Batten also suffering from glaucoma, and for this he had performed sclerotomy, but it was not successful. He thought it was contrary to what one would expect that an eye without an iris should have glaucoma.—Mr. C. DEVEREUX MARSHALL stated that he had seen several cases of this sort and he never remembered seeing one which did not have glaucoma. This was due to the fact that the stump of iris which was always found present was sufficient to block the angle, and this narrow ring was quite sufficient to produce the disease.—Mr. E. TREACHER COLLINS had examined several cases and had shown that they were specially liable to chronic glaucoma.

Mr. TREACHER COLLINS showed a child with Congenital Thickenings of the Conjunctiva, Opacities of the Cornea, and a Notch in the Left Lower Lid in the Vicinity of the Outer Canthus.

Mr. G. BROOKSBANK JAMES showed three case of Infantile Tabes due to Congenital Syphilis. They were all members of the same family and showed Argyll-Robertson pupils and other symptoms of tabes. There was, however, no atrophy of the discs and the fields were normal. He also showed a case of Occlusion of the Four Lacrymal Puncta, probably congenital. There was epiphora with dacryocystitis, and for this he had opened one of the occluded lower puncta.

Mr. J. B. LAWFORD showed an unusual case of Choroido-retinitis in a subject of hereditary syphilis.

Mr. G. W. ROLL showed a case of Localised Fundus Changes, probably of traumatic origin. The eye was injured in May last by being struck with a piece of iron. Two months later definite fundus changes were present. A foreign body was localised in, or just in front of, the sclerotic. There was seen to be a patch of atrophy close above the macula with pigmentary changes around it. He thought the foreign body, which was three millimetres long, had entered through the cornea, iris, and suspensory ligament, as the lens was clear.—Mr. A. W. ORMOND mentioned a similar case he had had in which after 10 days no wound was visible, although it was easily seen immediately after the injury.—Mr. R. W. DOYNE said that there was a black mark at the back of the lens which possibly was a scar.—Mr. W. LANG mentioned a similar case which he had watched for two years without deterioration of vision, and in the present case as everything was quiet he should be inclined to leave it alone.

Mr. J. H. FISHER showed a case of Mooren's Ulcer on the Cornea.

Mr. L. V. CARGILL showed a woman, aged 22 years, whose Sight had been Gradually Failing for about a year. The family history was good. Two years ago she suffered much from headache, and when first seen she was very anæmic, but an examination of the blood and urine showed nothing abnormal. The vision was $\frac{6}{9}$ and J. 14. The changes consisted of numerous greyish-yellow spots on the choroid. There were no vitreous opacities and the vessels of the fundus showed nothing but perhaps slight dilatation.

Mr. N. BISHOP HARMAN showed a patient with a Badly Developed Eye with Ciliary Processes adherent to the Anterior Surface of a Shrunken Cataractous Lens. This was congenital.—Mr. FISHER said that about three years ago he had seen an almost identical case.

Mr. HARMAN also showed a simple and efficient Portable Refractometer.

## EDINBURGH OBSTETRICAL SOCIETY.

*Spontaneous Rupture of an apparently Normal Uterus.—The Separation of the Placenta.*

A MEETING of this society was held on Dec. 11th, Dr. JAMES RITCHIE, the President, being in the chair.

Dr. R. MILNE MURRAY read a paper on a case of Spontaneous Rupture of an apparently Normal Uterus at the commencement of labour. After giving a description of the usual situation and various causes of rupture of the uterus he said that spontaneous rupture might occur in certain abnormal conditions of the uterus, such as the bicornuous uterus, the myomatous uterus, or in a uterus which had previously been the subject of a Cæsarean operation. Krukenberg had collected 13 instances of the last cause, and Rose and Mundé had recorded a case in which the uterus ruptured spontaneously in four successive pregnancies. Lastly, there was a very small number of cases on record in which rupture had occurred at the beginning of labour in a uterus of normal conformation and in which there was no gross complication. Such cases had been recorded by Ingersley, Hofmeier, and Professor A. R. Simpson. In the two first nothing abnormal in the uterus could be found, and the histological examination revealed nothing which could account for the accident. In Simpson's case the muscular fibres showed signs of fatty degeneration in a marked degree. To this group the present case belonged. The woman, aged 27 years, was pregnant with her fifth child. Her pains began about 11.30 P.M. and at 2.30 A.M. she sent for a medical man, to whom she complained of severe pain, especially at a spot midway between the umbilicus and the left anterior superior iliac spine. He could not hear the fœtal heart and he noticed the tenseness of the tumour and its marked deflection to the left side. There seemed to be no contraction sufficient to account for the pain complained of. On vaginal examination there was no sign of any presenting part; the finger could not be passed through the os and the cervix was not taken up. On further examination the fœtal parts could be felt at the upper part of the tumour with unusual distinctness; and it was thought on consultation to be most likely a case of extra-uterine gestation. When

Dr. Murray saw the patient she presented the appearance of one in a state of profound collapse. On vaginal examination under chloroform the finger, passed through the os, found the cervix only partially taken up; the lower uterine segment was empty and in the left side a rent in the wall could be felt through which the finger passed into the abdominal cavity. Abdominal section was performed and the fœtus and placenta were extracted. The rent in the uterus involved the left upper region of the bladder. There was an alarming amount of hæmorrhage going on, both from the tear in the uterus as well as from the proximal end of the torn uterine artery. The uterus was removed and the rent in the bladder was closed by several fine catgut stitches. Owing to the state of the patient the operation was rapidly completed without any peritoneal toilet. The patient did very well till the thirteenth day, when her temperature rose and continued high till the sixteenth day, but fell soon after a copious discharge of pus had escaped from the vagina. The subsequent recovery was uneventful. The formation of pus was attributable to the use of imperfectly sterilised silk ligatures. Dr. Murray could find no cause for the rupture. To the naked eye the uterus presented no abnormality, and microscopically a portion of tissue taken from the end of the rent showed a perfectly normal structure without any suggestion of a fatty change. With regard to the variety of fluids, including meconium, which had escaped into the peritoneum, Dr. Murray thought that if the material was not septic the less the peritoneal cavity was disturbed by attempts at "cleansing" the better. When the matter was septic all means should be taken to prevent its entrance into the cavity; or if it had entered it must be removed at all costs.—Professor SIMPSON, Dr. D. BERRY HART, Dr. F. W. N. HAULTAIN, and Dr. J. HAIG FERGUSON made remarks on the paper.

Dr. J. M. MUNRO KERR (Glasgow) read a paper on the Separation of the Placenta. It had special reference to the information regarding the mechanism observed in cases of conservative Cæsarean section. He referred to eight cases on which he had operated; all the mothers recovered and all the children except one were extracted alive. In six the uterus was opened by the ordinary vertical incision and in two by the fundal incision after the method of Fritsch. In two of the former and in one of the latter cases the placenta was incised and had to be separated in whole or in part before the child was extracted; in the remaining five cases the placenta was situated on the posterior or postero-lateral wall.—Dr. HART, Dr. R. C. BUIST, Dr. MURRAY, Dr. W. FORDYCE, Dr. S. MACVIE, and the PRESIDENT discussed the paper.

Specimens were shown by Dr. HART, Dr. MURRAY, Dr. J. L. LOCKIE, and Dr. HAULTAIN.

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FORFARSHIRE MEDICAL ASSOCIATION.—A meeting of this society was held on Dec. 5th, Professor D. MacEwan, the President, being in the chair.—Professor L. R. Sutherland sent specimens for exhibition at the meeting: (1) Metastasis in various organs in a case of Deciduoma Malignum; (2) Hæmorrhagic Pericarditis; (3) Papillomatous Ovarian Cyst, with Involvement of the Fallopian Tubes; (4) Tuberculosis of the Tongue; (5) Actinomycosis in Human Liver; (6) Cancer of Colon, Perforation of Gut by a Fish-bone; (7) "Rachitic Rosary" in Rickets; (8) Aortic and Mitral Lesion in an infant, aged four days; (9) Superficial Gastric Erosion—Fatal Hæmorrhage; (10) Extreme Duodenal Stenosis from cicatrisation of the ulcer; and (11) Recent Corpus Luteum and several specimens showing types of disease in animals.—Professor J. A. C. Kynoch read a paper on six cases of Abdominal Section for Pelvic Affections presenting points of interest. 1. A case of Repeated Ectopic Pregnancy in the same patient. 2. Repeated Ovariotomy. The first operation was complicated with pregnancy at the fourth month. 3. Repeated Ovariotomy within two years. 4. Repeated Ovariotomy; the first operation was complicated with pleural effusion. 5. Ovariotomy, illustrating the condition of pseudo-myxoma of the peritoneum. 6. Ovariotomy complicated with scarlatiniform rash. All recovered after operation.—Dr. J. B. Buist discussed several points brought out in the paper and spoke of the frequency of the scarlatiniform rash after child-birth. He agreed that such a rash after operation was due to toxæmia.—Dr. Halley referred to the frequency of such a rash in children after operation and mentioned two cases of his own in which the rash appeared after the operation.—Dr. Whyte referred to the occurrence of a similar rash in some patients after treatment with opium.—The President spoke in favour of leaving the other ovary in ovariotomies if it appeared healthy, and said that he considered the rash which occurred in the puerperium was due to septic absorption.—Dr. Halley read a paper on the Surgical Treatment of Sciatica; in it he restricted himself to nerve-stretching. He referred briefly to its first introduction into this country and said that he did not consider it was now done often enough in cases of sciatica, giving some hospital statistics to support his view. He quoted the views of various authors on the effect and results of nerve-stretching. He considered that it was a very effectual form of counter irritation and pointed out the advisability of traction on proximal and distal ends of the nerve and of separating the adhesions as far as possible. Bloodless nerve-stretching was considered harmful without an anæsthetic. The notes of one case were given in support of this. Notes of six cases of the open method of stretching the sciatic nerve were given, in all of which the pain had been relieved and had remained away in one after it had existed for five years and in another for eight years. In one of the cases paralysis of the extensors of the ankle and peronei had followed and continued for three months but then seemed to be passing off. Dr. Halley concluded by expressing the view that nerve-stretching of the sciatic nerve should be done earlier in cases and if pains did recur nerve-stretching should then be performed on the branches.—Professor Stalker spoke in support of nerve-stretching in certain cases of sciatica. He considered it the most effectual form of counter irritation for so deep a structure as the sciatic nerve.—Dr. Foggie spoke of a case in which the adhesions had been excised in addition to nerve-stretching with most beneficial results.—Dr. G. W. Miller also spoke.—The President mentioned cases of improvement after acupuncture, and agreed that nerve-stretching should be adopted earlier in cases where other methods were found to be futile.

LIVERPOOL MEDICAL INSTITUTION.—The second meeting of the session of the pathological and microscopical section of this society was held on Dec. 12th, Dr. J. Hill Abram being in the chair.—Mr. F. C. Larkin showed a young man exhibiting the symptoms of Nasal Hydrorrhœa (cerebro-spinal rhinorrhœa). 24 days previously he had fallen 15 feet, striking his forehead first. Immediately after the fall there were slight bleeding from the nose and symptoms of concussion but never complete loss of consciousness. The hydrorrhœa was first observed when he began to get about, three weeks after the injury.—Mr. Chauncy Puzey and Dr. W. B. Warrington showed specimens of Multiple Sarcoma from a young man. In addition to a large axillary tumour there were secondary deposits in the kidneys, the mesenteric glands, and the pancreas. The fundus of the stomach was involved in a mass of about the size of the closed fist which had ulcerated into that viscus. Microscopically the growth was a lympho-sarcoma, some of the cells of which resembled giant cells, being large and multinuclear.—Mr. Douglas Crawford showed (1) a Salivary Calculus which had existed in the left duct of Wharton of a patient for 13 years without giving rise to symptoms until the last five weeks, when the submaxillary gland became swollen; and (2) (*a*) a Uric Acid Calculus weighing 144 grains removed suprapubically from a boy aged seven years, and (*b*) Three Calculi weighing 202 grains removed by the same route and from the same boy 18 months later.—Dr. R. J. M. Buchanan exhibited specimens of Pulmonary Calculi which had been expelled during paroxysms of coughing.—Mr. Rushton Parker showed the kidney of a female which he had removed by nephrectomy in the fifth month of pregnancy. On section the organ was plentifully studded with yellow nodules aggregated chiefly in the cortex, and evidently pyæmic. The patient aborted during the next two days and the placenta was removed under chloroform by Dr. T. B. Grimsdale. She continued in an infective state and died on the eleventh day. The fœtus was macerating. At the necropsy the spleen, the liver, and the remaining kidney were found to be the seat of softening and cloudy swelling. There were a few chronic ulcers in the large intestine covered with adherent bile-stained lymph, but no clue could be observed, unless that were one, as to the pathological sequence of events or as to the cause of the infection of the right kidney. The upper part of its ureter was dilated and thickened, but no

explanation of this could be found.—Mr. E. E. Glynn exhibited specimens of Pneumococcal Meningitis associated with Lobar Pneumonia, and of Focal Necrosis of the Liver in early Typhoid Fever.—Mr. W. Thelwall Thomas exhibited (1) a Globular Piece of Lung, one inch in diameter, which was found floating in an empyema which had followed pneumonia as a sequel to typhoid fever (the patient recovered); and (2) an Ovarian Abscess Wall which had ruptured into the peritoneum, causing acute septic peritonitis. It was removed during operation for the relief of the peritonitis and the patient recovered.—Mr. F. T. Paul showed a recent specimen of Adeno-carcinoma of the Kidney. The specimens were discussed by the Chairman, Dr. Warrington, Mr. Puzey, Mr. Hamilton, and Mr. K. W. Monsarrat.—Sir William Mitchell Banks read a paper entitled "A Brief Résumé of our Present Position in Regard to Mammary Cancer." The paper was illustrated by lantern slides and microscopical and macroscopical specimens, and as it covered a wide field and presented many interesting and important points for discussion a resolution was passed adjourning the discussion to a special meeting for the purpose to be held in January, 1902.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Dec. 14th, Mr. J. A. Mansell Moullin, the President, being in the chair.—Mr. E. Stanmore Bishop described, and illustrated by lantern slides, certain Changes Occurring in the Endometrium of Uteri in which Fibro-myomata were present. The appearances seen seemed to justify certain conclusions, which were: (1) that the presence of fibro-myomata had an effect upon the endometrium of affected uteri; (2) that while still intra-mural they produced hyperplasia of the glandular layer; (3) that when sufficiently developed to exert pressure upon the lining membrane they produce disintegration of the deeper glands and of the interglandular substance; and (4) that when the growth was polypoid the endometrium over the polypus and also over the portion of the uterine wall opposed to it became reduced to a single layer of columnar ciliated epithelium which at points or areas of great pressure approximated to the squamous type. He then gave a demonstration, also illustrated by lantern slides and numerous microscopical preparations, of the condition of the arteries in the macroscopically normal tissue of uteri in which fibro-myomata had been found. The specimens showed progressive thickening of the tunica media and the irregular distribution of the hypertrophied coat around the arterial lumen. These appearances, which were seen in whatever direction the artery had been cut across, lent support to the theory propounded by Pilliet, Gottschalk, and other writers, that these tumours were due to hypertrophic changes in the muscular tissue in the walls of certain arteries. Mr. Stanmore Bishop explained upon this hypothesis the tendency of these neoplasms to be multiple, the formation of a capsule around them, the characteristic whorled appearance of their fibres, the increase of growth during pregnancy and corresponding decrease during involution, and the difference in consistence and rapidity of growth of tumours of the cervix and of the fundus. He finally indicated the effect which the acceptance of such a view must have upon their treatment.—Mr. J. H. Targett had examined sections of many uterine fibroids and he thought that there was abundant evidence of thickening of the muscular coat of the vessels and of their fibrous sheaths. After a time the new material became fibroid and almost devoid of nuclei. This degenerative change was very characteristic of uterine myomata and enabled their structure to be easily distinguished from normal uterine tissue. As regarded the endometrium, he had in some cases found hyperplasia especially affecting the stroma, while in others the endometrium had been thinned by distension and its glandular follicles had become disarranged or even obstructed at their mouths, causing retention of secretion and shed epithelium in their acini. He had never met with tubules lined with epithelium in the substance of a fibroid, and therefore did not think that these tumours commonly originated from congenital relics in the uterine walls, as stated by some observers.—Dr. Macnaughton-Jones cited cases to prove that there was strong clinical evidence in support of Mr. Stanmore Bishop's view.—Dr. Macnaughton-Jones demonstrated Some Recent Gynæcological Appliances and showed the following specimens: (1) Malignant (?) Ovarian Tumours with Myomata; (2) Sarcomatous Tumour of the Vagina; and (3) Adnexal Tumour causing Uncontrollable Vomiting. The last was a cyst of the left ovary containing sanguineous fluid.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The third meeting of the session (clinical evening) of this society was held on Dec. 6th, Mr. Alfred Cooper, the President, being in the chair.—Mr. C. R. B. Keetley and Dr. Saunders showed a case of Paroxysmal Neuralgia of the Trigeminal Nerve in which pain had been relieved by stretching and the excision of a portion of the two lower divisions of this nerve.—Mr. Keetley showed also a case of an Osteoplastic Resection for Malignant Disease of the Nasal Fossa.—Dr. Taylor showed a case of Congenital Abscess of the Clavicles.—In reply to remarks by Mr. W. McAdam Eccles, Mr. Lloyd, and Mr. Keetley he pointed out that though the sternal epiphysis showed some attempt at development there was no part of the sterno-mastoid attached to it; that the patient showed some signs of congenital syphilis which might be a factor in the production of the deformity; and that although possibly the nether limbs were more frequently the subject of congenital defects arrests of development were more serious and more profound, as a rule, when they occurred in the upper limbs.—Dr. Ball showed, for Dr. F. S. Abraham, a case of Lupus Erythematosus of the Face associated with Lupus Vulgaris of the Palate.—Dr. Chambers showed for Dr. Abraham a case of Nævus Linearis (so-called) affecting the Right Side of the Trunk.—Dr. Saunders showed a case of Pigmentation of the Skin in a boy, aged 13 years, probably Addison's disease. This affection had come on gradually in the last four months. The pigmentation was general, with accentuation over the region of the back of the neck, the axillæ, the groins and genitals, and over the prominent dorsal spines. It was least over the chest and the backs of the upper arms. The mucous membrane of the mouth was affected. The symptoms were debility, anæmia, and heart weakness, with occasional attacks of vomiting and diarrhœa. The boy had improved considerably in general health under treatment, after attention to the digestion, with cod-liver oil and iron, though the pigmentation had somewhat increased.—Dr. Grünbaum drew attention to two methods based on physiological observations which might assist in the diagnosis of early cases of Addison's disease. Langlois found that the ergographic tracings obtained from patients with diseased suprarenal glands were unique, in that the curve produced by joining the apices of the contractions fell very rapidly. This indicated a rapid diminution in power on the part of the muscle, this diminution being much more rapid in Addison's disease than in any wasting disease, such as advanced phthisis. Dr. Grünbaum had had the opportunity of confirming Langlois's observations. The other method was based upon the effects of the administration per os of suprarenal gland. The only cases in which Dr. Grünbaum had been able to measure any increase in blood-pressure were those of patients suffering from Addison's disease, but whether this was diagnostic of the disease he was not at present prepared to say.—At the second meeting of the society held on Nov. 1st Mr. McAdam Eccles read a paper on Some Points in the Pathology of Appendicitis, and a discussion followed.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 5th, Dr. C. H. Willey, the President, being in the chair.—Mr. Edward Skinner showed specimens from a case of Melanotic Sarcoma of the Liver.—Dr. D. Burgess read notes of the following cases: (1) A Gastro-Intestinal Form of Renal Calculus; and (2) Pernicious Anæmia.—Dr. S. White exhibited the following specimens:—1. Aneurysm of the Commencement of the Right Common Carotid Artery for which distal ligature of the carotid and subclavian arteries had been unsuccessfully practised, the patient eventually dying from exhaustion incidental to proximal ligature. The case was interesting on account of the absence of aneurysmal pulse, sphygmographic tracings taken from both carotids showing no appreciable differences. The aneurysmal tumour, which was of the size of a turkey's egg, caused no pressure symptoms beyond contraction of the right pupil, and there was entire absence of thrill and bruit. The patient was a retired soldier, aged 40 years, and had had syphilis. 2. Resection of the Transverse Colon and a Portion of the Small Intestine for a rapidly growing Malignant Tumour of the Omentum in a man, aged 24 years. The patient had made an excellent recovery, but as a number of infected mesenteric glands were unavoidably left speedy recurrence was anticipated. 3. An Excised Chronic Ulcer from the Stomach of a man, aged 52 years. The history dated back four years and the patient had become much emaciated and was no longer

able to work. The ulcer was situated at the upper and back part of the stomach near the pyloric end and measured an inch in diameter. It had almost eaten through the stomach walls and was surrounded by extensive adhesions. The patient had made a good recovery. A noteworthy feature in the case was the advent of alarming hæmorrhage after inflation of the stomach for diagnostic purposes, although previously there had been no hæmatemesis. 4. A Resection of Small Intestine for Round-celled Sarcoma that had produced obstruction. The patient was a female, aged 52 years. The operation was followed by death from shock.—Dr. J. Sorley read notes of a Personal Interview which he had had during the summer with M. Crôtte, the founder of a comparatively recent method of treating consumption practised in Paris. The method consisted of the transfusion of a specially-prepared solution of formic aldehyde into the tissues of the body by means of a very powerful static machine. The method had at least a certain amount of probability as regarded its efficacy, and some of M. Crôtte's principles had been confirmed by independent observers. A needless amount of secrecy, however, surrounded the nature of the formic aldehyde solution, and until this was published in full the method could not but be tainted with a suspicion of quackery. The examination and treatment of patients seemed to be conducted on sufficiently rigid lines, and the statistics were, if true, little short of marvellous. The treatment was in operation in Paris, Bonn, and New York.

GLASGOW SOUTHERN MEDICAL SOCIETY.—A meeting of this society was held on Dec. 12th, Dr. John Stewart, the President, being in the chair.—Professor Ralph Stockman showed a large number of lantern slides illustrative of clinical and therapeutic interest. The serious effects produced by lead poisoning on the various tissues of the body were well depicted. The constant growth of the connective tissue, the degeneration of the muscular fibres, and the hypertrophy of the coats of the blood-vessels as a result of the action of the lead were rapidly surveyed. In the same disease a photograph of the large intestine showed numerous well-marked contractions at different parts of its course; and pulse-tracings were given to illustrate the increase in the blood-pressure. By a series of slides the different stages in the preparation of anti-diphtheritic serum were brought under notice. Charts were thrown on the screen by which at a glance the beneficial effects of the antitoxin on the local throat conditions and on the pulse and respiration could be rapidly recognised. The injurious effects at times resulting from dressings containing weak solutions of carbolic acid were represented. In one case gangrene of the finger necessitating amputation was brought about by a 5 per cent. solution. In the opinion of Professor Stockman this unfortunate result was produced by the acid causing thrombosis of the artery and the absence in the finger of any collateral circulation. Members were reminded of the peculiar susceptibility to drugs in some persons by the exhibition of slides depicting appearances brought by small doses of cocaine, atropin, and iodine. Other photographs of general interest concluded the lantern demonstration and at the close members had the opportunity of viewing diagrams of various diseases and also some microscopical slides.—Professor John Glaister gave an address, accompanied by lantern demonstration, on the Life-history of the Parasites of Malaria.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The third meeting of the session of this society was held on Dec. 11th, Dr. Barclay J. Baron being in the chair.—Dr. J. Michell Clarke showed the following patients: (1) A case of Lesion of the Pons; (2) a case of Amyotrophic Sclerosis; and (3) a case of Hereditary Cerebellar Ataxy. He also showed a specimen of Perichondritis and Necrosis of the Laryngeal Cartilages.—Dr. E. H. E. Stack, Dr. C. H. Walker, Dr. F. H. Edgeworth, Dr. T. Fisher, and Dr. P. W. Williams discussed the cases.—Dr. J. O. Symes and Dr. Newman Neild showed microscopical specimens of Blood from cases of Malaria.—Mr. J. Paul Bush read a paper (illustrated by diagrams) on a case of Gastro-jejunostomy.—Mr. C. A. Morton, Dr. R. G. P. Lansdown, Dr. J. E. Shaw, Dr. Clarke, and Dr. E. W. H. Groves spoke on the subject.—Mr. A. W. Prichard read notes on a case of Intussusception.—Dr. J. L. Firth and Mr. Bush commented on the case.—Mr. F. H. Rose read a paper on Kélène as a General Anæsthetic.—Dr. Symes, Dr. Williams, and Mr. H. E. Harris remarked on the paper.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held on Dec. 11th, Mr. John Gay, the President, being in the chair.—The President said that he had the pleasure to inform the society that, through the kindness of the governors of the Bolingbroke Hospital and the exertions of Mr. C. R. C. Lyster (the medical superintendent), the hospital was to be the future home of all their meetings. Dr. J. J. M. Dunbar then proposed and Dr. Mackintosh seconded the following motion:—

That the South-West London Medical Society desires hereby to express their grateful appreciation for the kindness and courtesy of the governors of the Bolingbroke Hospital in granting them the use of the premises of the hospital for the purpose of the meetings of the society.

A vote of thanks was also passed to Mr. Lyster, who replied.—Dr. A. E. Giles read a paper entitled, "The Diagnosis of Pelvic Tumours."—Several members discussed the paper and Dr. Giles replied.—A hearty vote of thanks was given to Dr. Giles for the paper.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 6th, Dr. Thomas C. Meggison, the President, being in the chair.—Dr. James F. Goodhart delivered the Purvis Oration, taking as his subject, "General Practice: an Original Research." After the oration a largely attended conversazione was held.—Mr. J. J. Vezey, F.R.M.S., gave a demonstration of X-ray and High-Frequency Apparatus.—The President exhibited lantern slides of Continental Health Resorts.—There were also exhibitions of the following:—Messrs. Krohne and Sesemann, Surgical Instruments; Messrs. Callard and Co., Diabetic Foods; Messrs. Parke, Davis, and Co., Therapeutic Preparations; Messrs. Watson and Co., Scientific Apparatus.

# Reviews and Notices of Books.

*A Practical Guide to the Administration of Anæsthetics.* By R. J. PROBYN-WILLIAMS, M.D. Durh., Senior Anæsthetist and Instructor in Anæsthetics at the London Hospital; Lecturer on Anæsthetics at the London Medical College; Assistant Anæsthetist at the Royal Dental Hospital of London. Illustrated. London: Longmans, Green, and Co. 1901. Pp. 211. Price 4*s.* 6*d.*

THE writer of this book has set himself to instruct students and he has performed his task well. It is important that such teaching should be dogmatic and clear; that directions should be at once concise and lucid; and that only essentials should be presented to the learner, although his attention should be directed to the importance of elaboration, to be afterwards undertaken. Dr. Probyn-Williams has, we think, satisfied these desiderata very successfully. After some "general considerations" the reader is introduced to the Difficulties and Dangers of Anæsthesia, this section being followed by chapters on Nitrous Oxide, Ether, Chloroform, and Local Anæsthesia. The general considerations give a very fair account of the preparation for the anæsthesia and of the patient as well as of the course of, induction of, and recovery from, the anæsthesia. In this connexion it may be said that in ordering washing-out of the stomach *before* giving the anæsthetic in cases of operations upon that organ we think a caution might have been added that such a proceeding produces grave and even fatal shock in very asthenic cases. Nor are we in accord with Dr. Probyn-Williams when he says that a "pin-point" pupil often heralds vomiting (p. 21). The treatment of the patient after anæsthesia is admirably given and is the more valuable as this important matter is too commonly neglected. On p. 52 the treatment of syncope is liable to be misunderstood by the inexperienced. Nélaton who introduced inversion as a means of restoring circulation in the vessels of the brain was careful to limit it to cases of true circulatory failure. If the heart is over-distended from pulmonary engorgement inversion

has always been held to be improper treatment, but this does not lessen the value of inversion in appropriate cases. The author rightly insists that respiratory enfeeblement commonly coexists with circulatory depression and points out that artificial respiration, whether accomplished by Wood's method of pulmonary perflation or by what is more commonly practised in this country—viz., the Silvester-Bain method—will by itself tend to steady and to assist the flow of blood through the lungs and systemic vessels. Inversion at its best is in cases of sudden fainting often unassociated with overdose of the anæsthetic, for in these there is no question of engorgement of the vessels of the lungs, and especially is this the case in the instance of children.

The chapters dealing with General Anæsthesia describe the more usual methods of administering nitrous oxide, alone and mixed with air or oxygen, or ether given alone or in sequence with nitrous oxide or chloroform. The teaching is sound and the student is not confused by a multiplicity of apparatus or of methods. In speaking of the continuous administration of nitrous oxide by Coleman's nasal-cap method it is said that the most suitable cases are those in which little blood is flowing, such, for example, as operations for devitalising several teeth. Dr. Probyn-Williams, while advocating the use of "gas" and "gas" with oxygen in minor surgery, rightly, we think, points out that for operations lasting more than a few minutes such a form of anæsthesia has insuperable objections. Ether may be given to children by an open method, as Dr. Probyn-Williams very properly points out; but it is a question, we think, that lends itself to discussion whether any particular apparatus, as such, alarms a child. It is the ether, the fright caused by the expectation of the "unknown," which really demoralises the little patient, and probably that method which achieves unconsciousness with the greatest rapidity is the one which gives the child the minimum of discomfort. The description of ether anæsthesia is very carefully and well written. *Inter alia* the common error is exposed that this form of narcosis necessarily involves cyanosis—i.e., incomplete respiration. Again, the chapter which details the administration of chloroform is admirable with, perhaps, the one exception that on p. 153 we are told that "struggling must be met by an increased dose of chloroform with a still freer supply of air." Unless this rule is more fully explained it might, we think, lead the youthful chloroformist into the grave error of allowing the patient to inhale chloroform freely while unconscious struggling is going on. The saving clause, "with a still freer supply of air," may easily under such circumstances be neglected or not appreciated as being the most important part of the rule. Dr. Probyn-Williams indicates the dangers of the various "safe" methods which unfortunately are at present vaunted by instrument-makers, the whole essence of which consists in the dangerous substitution of a mechanical for an intelligent administration of chloroform which is at once the safest and most dangerous of all general anæsthetics. The use of Harley's mixture—the A.C.E.—is fully set forth in these pages and the principles which should guide the administrator are given clearly and emphatically. That this mixture ought to be prepared from definite ingredients as insisted upon by Martindale might, we think, be adverted to in subsequent editions. The concluding chapter consists of an account of the various plans in vogue for producing local anæsthesia. The original solutions of Schleich, which contain morphine, are usually, since the publication of the papers of Dr. Braun and Dr. Heinz, replaced by solutions of eucaine β, and probably this method is superior to those both of Reclus and Schleich. As a whole, Dr. Probyn-Williams's book may be accepted as a successful solution of the difficult problem involved in any attempt to marshal the facts of anæsthesia in such a way that the average student can master them and apply them in practice. The illustrations, although in some instances rather crude, are mostly original and render the descriptions of apparatus more easy of comprehension. The book is of convenient size and well printed and is provided with a useful index.

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*Lehrbuch der Allgemeinen und Speciellen Pathologischen Anatomie für Aerzte und Studirende. (Text-book of General and Special Pathology for Practitioners and Students.)* By Dr. ERNST ZIEGLER, Professor of Pathology at the University of Freiburg. Tenth edition. Vol. I. Jena: G. Fischer. 1901. Super royal 8vo. Pp. 810, with 586 Illustrations, some in colours. Price 12 marks.

TWENTY years have elapsed since the first appearance of Professor Ziegler's text-book, and the fact of a new edition having been called for on an average every two years throughout this period bears striking testimony to the value placed upon the book by students of pathology. The present edition, says the author, is the result of 22 years' almost unremitting labour, and we can realise how great the work has been when we consider the strides which the subject has made within this period and observe how closely the book has followed each advance in knowledge. The author's object has been to present the more important contributions of the nineteenth century to our knowledge of pathology in such a form as to prove useful both to practitioners and students, and we may say that in this he has been eminently successful. The large size of the volume (we must admit that it looks a trifle ponderous), by which some may be daunted, is due partly to the extent of ground which has to be covered, but mainly to its wealth of illustrations, not to any lack of conciseness in the text, for the author shows remarkable skill in extracting the important from the unimportant and placing it graphically before his readers. Several changes in the ninth edition will be noticed. The first three sections—on External and Internal Causes of Disease, on the Spread of Morbid Processes in the Organism, and on Immunity—have been rewritten and simplified. These chapters form a useful introduction to the rest of the book. From them the student may obtain a bird's-eye view, as it were, of the whole field which is subsequently to be examined in closer detail and he will thus be spared the feeling of helplessness which is frequently felt by the beginner when he approaches the study of so vast a subject as pathology. The author's views on inflammation have undergone no change, while in the matter of the etiology of certain new growths he has been influenced by recent suggestions as to their probably parasitic nature only to a slight extent, the "not caused by infection" of the former edition having been changed to "probably arising spontaneously." Even this concession, we are informed, must not be taken to indicate any doubt in the author's mind as to the correctness of the earlier statement; it is made merely with the view of somewhat toning down its uncompromising dogmatism. The chapters on Parasites, Animal and Vegetable, have been considerably enlarged and closer attention has been paid to this branch of the subject than might perhaps have been looked for in a work on general pathology. Especially is this the case with some of the pathogenic micro-organisms, such as the streptococcus pyogenes, staphylococcus pyogenes aureus, and the tubercle bacillus. However, no one who has read the description of them is likely to quarrel with the author on this account. The illustrations with which the volume is lavishly supplied are excellent, while the coloured ones, particularly in the chapters which we have just mentioned, are really beautiful. To each section is appended a carefully selected list of references to the literature. These lists the student who wishes to widen his knowledge in any particular direction will find very useful and they will be specially appreciated by anyone who has worked his laborious way through the miscellaneous

mass of references given by many text-books. The volume before us shows us a great advance on the eighth edition, from which the latest English edition was made, both in text and illustrations. The former has in many places been much improved by being re-arranged, while the number of the latter has been increased from 458 to 586. The present edition more than maintains the standard reached by its predecessor and in saying this we accord it high praise.

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*A Text-book of Pharmacology and Some Allied Sciences.* By TORALD SOLLMANN, M.D., Assistant Professor of Pharmacology and Materia Medica, Western Reserve University, Cleveland, Ohio. London and Philadelphia: W. B. Saunders and Co. 1901. Pp. 894, large 8vo, Illustrated. Price 16*s.* net.

WE should have thought that there were enough text-books on pharmacology and allied subjects already in the market. Many, if not most, of them are mere compilations and contain little or nothing of the results of original research. Dr. Sollmann does not lay claim to much originality, but we may give him credit for a new arrangement of much old matter. The book before us is a curious mixture of scientific theories and pieces of practical advice. The volume gives evidence of much laborious reference to standard works, and under each heading is to be found a large number of details, interesting enough in themselves it may be, but of no particular service to the practitioner of medicine. The illustrations are well executed, but mostly unnecessary, including as they do pictures of glass measures, burettes, flasks, retorts, and the like, all objects which the student will be familiar with from the first day which he spends in the laboratory. Other illustrations are those of sphygmographic and other curves which seem a little out of place in this book. "The subject of materia medica is a vexatious one in medical teaching from the difficulty of deciding how much matter should be included," writes the author in his preface. "This is still more true of a text-book intended at once for study and for reference. I have aimed to limit the information to that which is likely to be of actual use in prescribing." We do not think that the author has been very successful in this aim, for there are far more details in some places than are in any way necessary or desirable.

A word of praise must be accorded for the careful preparation of the index of contents; it is full of repetitions and cross-references, which make the work of reference simple enough. After the name of each drug are several page-numbers, but only one of these is in bold-faced type, and that one refers to the main mention of each topic. The work is full of chemical and biological experiments and the effects of drugs on frogs and on mammals are frequently mentioned.

Part I. of the volume contains 126 pages and deals with the work of the dispensing chemist. Part II. is devoted to pharmacology, materia medica, and therapeutics, and includes a certain amount of toxicology. To give the intending buyer an idea of the arrangement of material we will refer to a chapter on the "ion" action of soluble salts. The theory of "ion" action is first discussed, then the "ion" groups are dealt with in turn—first, the sodium, potassium, and ammonium groups, then those of the haloid group. Under the heading "The Bromide Ion," for example, there is first a description of the general action of the "ion" itself, then an explanation of "bromism," then follow paragraphs on excretion, therapeutic uses, and pharmaceutical preparations. The author recommends the use of bromine preparations in cases of "over-action of the brain," and the consequent worry and sleeplessness, but states that bromides are of no value for the relief of pain and that they should not be used as hypnotics.

Part III. of the volume contains 42 pages and is devoted to practical exercises in chemical testing, fermentation experiments, and experiments on frogs and mammals. Between this part and the index are to be found an appendix containing methods of analysing the causes of pharmacological actions and a reference table of drugs, their chemical formulæ, solubility in water and alcohol, and their doses in apothecaries' and metric systems according to the American Pharmacopœia. This last is a useful table for reference. It has been adapted from the United States Dispensatory and Coblentz's "Pharmacy."

Carefully as this work has been prepared, undoubted as is the large amount of information which it contains, we do not feel inclined to recommend it to the practitioner of medicine who may be on the look-out for a really serviceable book on drugs. Too much is attempted, and the book is consequently neither a complete account of therapeutic measures nor yet a work for thorough reference with regard to the chemistry or botany of medicinal agents.

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*Report on Sanitary Measures in India in 1899–1900.* Vol. XXXIII. Presented to both Houses of Parliament by command of His Majesty. London: Printed for His Majesty's Stationery Office by Darling and Son, Limited. 1901. Pp. 262. Price 2*s.* 1*d.*

INDIA, as everyone knows, is a very big and densely populated country and the official reports that come from it are very numerous and some of them voluminous. It is, therefore, essential that they should be carefully sifted and considerably abridged in this country to fit them for the information of Parliament and of those interested in our great dependency. When we consider all the labour and ability displayed in India and in this country in their production it is lamentable to think of the waste of energy involved, for while some of the reports only concern a few of the Indian official classes, others merit far more and much wider attention than they receive. Those reports which deal with the public health, vital statistics, and the progress of sanitary and medical science in India are from time to time revised, condensed, and edited in the India Office of this country, and the results are published periodically. Under the above title we have the last published report of a series containing a great deal of varied information, drawn up with great analytical skill, and couched in a clear and terse style of English. We have anticipated the publication of some of its contents when reviewing the excellent report of the Sanitary Commissioner with the Government of India for 1899. We need not, therefore, dwell upon such subjects as the health of the European and native armies, jails, and general population of India, and the diseases which have been prevalent. We shall confine ourselves to a few, and but a few, points of interest.

The report does not deal exclusively with the statistical, sanitary, or epidemiological sides of disease, but whenever required for the explanation or elucidation of a subject it touches upon pathological and bacteriological points also. At page 47, for example, the bearing of Dr. Horton-Smith's Goulstonian Lectures for 1900 and other contributions to the literature of enteric fever on its scientific side is described. Reference is made, in speaking of tropical fevers, to a bacillus coli form of fever, to enteric fever and dysentery, to second attacks and the periods of incubation of enteric fever, and the cause of relapses. At page 143 there is a brief sketch of the progress made in the investigation of Indian fevers and the new field of parasitology which has been opened out, and at page 150 the facts connected with enteric fever and preventive inoculation in India in 1899 are set forth. The remarks on famine and the birth-rate and the physical and social conditions which promote or retard the comparative fecundity of the Indian peoples are summed up and commented upon in an interesting and instructive manner. The section of the report devoted to the consideration of the history of

the chief diseases—cholera, fevers, plague—and the chronicle which is given epitomising recent discoveries and observations, with their bearing on the many still unsolved problems relating to the etiology and epidemiology of these diseases, strikes us as being very well done. Assuming that these reports are drawn up and compiled by some non-medical official at the India Office from the mass of publications and documents sent home by the Indian Government we may fairly credit him with great discrimination in selecting his material and congratulate him on his ability and skill as a *précis* writer.

## CHRISTMAS BOOKS.

From Messrs. CHATTO AND WINDUS we have received the following books:—1. *Tales of a Dying Race.* By Alfred A. Grace. 1901. Pp. 250. In this volume are related short stories of the Maoris, and many of them first saw the light in the pages of *The Bulletin*, Sydney, New South Wales, in the New Zealand *Triad*, and in the Dunedin *Star*. Many of the stories are prettily narrated, and describe the Maoris in times of peace and war, love and hate. This book will well beguile many an idle half-hour. 2. *Three Men of Mark.* By Sarah Tytler. 1901. Pp. 334. Price 6*s*. In this volume is told rather an uninteresting story, without much plot, concerning an elderly Scotch spinster and her three brothers—the "three men of mark." The lady kept house in the quiet home of the Stewarts at Yetts. To this home the more distinguished brothers come on visits. The book, if somewhat monotonous reading, contains a careful description of Scottish home life and interests. 3. *A Sower of Wheat.* By Harold Bindloss. 1901. Pp. 373. Price 6*s*.—A powerful story, well written, of Canadian life. The hero, Ralph Crosfield, arrives in Canada with only a capital of £100, and after many difficulties becomes the owner of a large property and marries the daughter and heiress of a retired officer. 4. *Told by the Taffrail.* By Sundowner. 1901. Pp. 311. Price 3*s*. 6*d*.—We are informed by the author that these stories have been "thrown together" during the course of a journey through the Austral colonies, the Eastern and Pacific seas, and South and Central America. Many of them have appeared already in the daily and weekly press. They are well written, thoroughly interesting, and will probably be widely read. 5. *Only a Nigger.* By Edmund Mitchell. 1901. Pp. 351. Price 6*s*.—Readers will find this a lively and exciting story with plenty of thrilling incidents and adventures. It is a tale of two friends, one an Englishman, the other a Hindoo, who are respectively in love with two English sisters. For the sake of his friend and to shield the girl he loves from grief the Hindoo at much danger to himself seeks to save his friend's life which is threatened by a secret society of which the latter is a member. The details are well planned and the subsequent adventures prove exciting. The book is neatly and attractively bound and the reader will find much interest from cover to cover.

Messrs. BLACKIE AND SON have forwarded to us the following:—1. *Nonsense! Nonsense!* Written by Walter Jerrold and pictured by Charles Robinson. 1902. Pp. 66. Price 6*s*.—The book consists of "nonsense rhymes" and suitable illustrations. The rhymes, however, are so dull that no self-respecting child will ask for them to be read to him twice. The pictures are striking and of a fiery "bluggy" hue calculated to delight any number of young Budges and Toddies. It is true that sometimes a stupid "grown-up" has to gaze at a picture for some moments before he can recognise what the big red blob on the page represents, but then, of course, much must be forgiven to the benighted beings of the nineteenth century. 2. *With Roberts to Pretoria.* By G. A. Henty. 1902. Pp. 384, 12 illustrations. Price 6*s*.—The hero of this story, an English lad who went to South Africa shortly before the outbreak of war in order to make his fortune, joins a colonial regiment and early proves himself to be an exceptionally clever scout. He takes part in the series of battles that end in the disaster at Magersfontein, is captured and imprisoned at Pretoria, but escapes in time to fight at Paardeberg and to march with the victorious army to Bloemfontein. While the troops are delayed at this place he rides with Colonel Mahon's column to the relief of Mafeking and accomplishes the return journey with such dispatch as to be able to join in the triumphant advance to Pretoria. The tale is well told and will delight boy readers. 3. *Carbineer and Scout.* By E. Harcourt Burrage. Pp. 240. Price 2*s*. 6*d*.—This is one of the many story-books inspired by the struggle in South Africa. Hugh Dunstan and Cyril Johnstone are good examples of their class—i.e., the youthful hero. Although they have a large share of luck they do not perform impossible feats after the manner of Jack Harkaway.

# Looking Back.

FROM

## THE LANCET, *SUNDAY, DEC.* 21, 1823.

COPENHAGEN, *Nov.* 18.

Dr. HERBOLDT, of this place, has just published an account of an extraordinary pathological case, which is attested by thirty-four physicians. A young Jewess, of delicate constitution had enjoyed a good state of health up to the age of fourteen years. At this time she began to suffer excruciating pains, which continued for eighteen months, and in the course of this period there were extracted from different parts of her body, at intervals of several days, weeks, and months, 273 needles! Some time after about a 100 more came out from a tumour in the shoulder which was attended with violent pain, and symptoms which threatened her life. They were for the most part sewing needles, but broken, without heads or points, and almost all of them black and rusty. Three pins were found among them, which were still bright, and one of the kind commonly used for the hair. In his statement, the doctor has described with precision the parts of the body from which they were extracted, but he has not offered any conjecture as to the manner in which they could have entered the body of this young person. He promises another paper on the subject, in which we trust he will satisfy the curiosity of the public.—*Journal des Débats*

*Credat Judæus Apella!!!*

### ARMY SURGEONS, AND ASSISTANT SURGEONS.

NOTICE has been given to the army surgeons, and assistant surgeons, on half-pay, that their services are likely to be soon required. The new levy is to be raised by beat of drum; and orders have been issued, with a view to the expeditious raising of the men, for the officers employed to repair to those parts of the kingdom, in which they may be supposed to possess the most influence.—*Courier.*

### ST. THOMAS'S AND GUY'S HOSPITALS ANNIVERSARY DINNER.

The Practitioners who have been educated at St. Thomas's and Guy's Hospitals, and the Gentlemen now attending those Institutions, will Dine together on Thursday, the 8th of January next, at the Freemason's Tavern, Great Queen-street, Lincoln's Inn-fields.

BENJAMIN TRAVERS, Esq., F.R.S. in the Chair.

*Stewards.*

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| Dr. Roots. | Dr. Bright. |
| Frederick Tyrrell, Esq. | Robert Kent, Esq. |
| John F. South, Esq. | William Gaitskell, Esq |
| George Browne, Esq. | S. H. Sterry, Esq. |
| J. A. Gillham, Esq. | John Prior, Esq. |
| Tobias Brown, Esq. | James Paty, Esq |

Dinner on Table at Six o'Clock precisely.—Tickets, one guinea each, to be had, on or before Saturday, the 3d of January, at the Bar of the Tavern; and Laundy's, St. Thomas's-street.

# THE LANCET.

*LONDON: SATURDAY, DECEMBER 21, 1901.*


## Public-house Reform.

IT is generally admitted that many of the public-houses in this country are neither regulated nor arranged in accordance with the best interests of those who frequent them. During the last few years efforts have been made to secure improvement in this respect by providing inns which are carefully looked after by committees consisting of people whose chief wish and aim it is to change the existing state of things. Prominent amongst those who have been active in this good work are the Bishop of CHESTER, Earl GREY, Major H. J. CRAUFURD (who is chairman of the Committee of Management of the People's Refreshment House Association), and Colonel Sir COLIN SCOTT MONCRIEFF, K.C.M.G. (the chairman of the executive council of the same association). At the present time this company has 19 inns under its management. Of these the first was taken over in the year 1897. It is situated at Sparkford, Somersetshire, and is owned by the Rev. F. S. BENNETT. In the following year inns at Hoar Cross, Burton-on-Trent, and at Tunstall, Wickham Market, belonging respectively to the Hon. Mrs. MEYNELL INGRAM and to the Hon. W. LOWTHER, were added to the list. In the year 1899 three more houses were obtained, in the year 1900 seven, and during the present year six have been taken. From this it is seen that the work of the association has gradually extended, and it has been carried out in parts of the country situated at great distances from one another. The aim of the association has been "to promote the efficient management of public-houses in the interests of temperance." The manager of each inn is paid a fixed salary; the business has proved remunerative, a dividend of 5 per cent. is paid to the shareholders, and the surplus is devoted to public purposes.

A small and purely local enterprise, the Kelty Public-house Society, Limited, has also been most successful. It was registered in May, 1899, under the Industrial and Provident Societies Act (1893) and has a capital of £1138 10*s*. The society owns one licensed house. By the rules of the society the maximum dividend payable is 5 per cent. The surplus profits for the year 1900 were devoted in part to the support of a local library and in part to the maintenance of a district nurse. Arrangements have also been made for the formation of a bowling-green and a pavilion in the village. The Hill of Beath Tavern may also be quoted as a remarkably successful venture. The company which owns this inn is managed by a committee of miners. The surplus profits realised during the last five years have been spent in lighting the village with electricity, in forming a bowling-green, and in providing an institute with reading-room, billiard-room, and library. The committee of management of the inn believe in early closing. They think that "a public-house is no place after 9 P.M. for a man who has to put in a good day's work on the morrow. It seems a little hard that no one shall have cakes and ale after 9 P.M. because the committee are so virtuous. Public-houses, it may reasonably be contended, should be for the use of the public and should be compelled to supply good food and drink at all reasonable hours.

The legitimate complaints which respectable members of the public have against the existing condition of things are (1) that it frequently happens that food is not supplied in public-houses; (2) that when it is supplied it is usually bad in quality and excessive in price; and (3) that the drink supplied is often bad and the price excessive. Now, in regard to the question of food, it is a monstrous shame that every licensed house should not supply it at prices which are reasonably low. Most of the railway refreshment rooms are scandalously at fault in this matter. The bad quality of the alcoholic liquors sold in country places is often due to the fact that one brewing firm has a practical monopoly of a whole district and the unfortunate inhabitants are under existing conditions left to its mercy. Practical public-house reformers usually agree that the manager of an inn shall not derive a pecuniary benefit from the sale of intoxicating drinks, but some of them think that they should be allowed to get a commission on the sale of food. Should this payment be taken from the profit of the food it appears, however, that the customer would by no means benefit by such an arrangement. The societies which have been referred to above seem to obtain enormous profits. It is not very evident that it is to the interest of their customers that so large a proportion of the profits should be bestowed on libraries and other extraneous objects. It would possibly be more to the interests of the people chiefly concerned if the profits were reduced by supplying customers at a less extravagant price. This contention does not appear to have the support of the philanthropists who have been the pioneers of a most useful work. We recommend it to their earnest consideration.

We have lately received a report of an association called the Central Public-house Trust, together with a request that we should authorise the secretary to add our name to the list of members. The president of the society is Earl GREY, the Bishop of CHESTER is one of the vice-presidents, and the executive committee consists of the chairman, Major CRAUFURD, and Colonel Sir COLIN MONCRIEFF, Major-General the Hon. HERBERT F. EATON, Mr. W. CECIL HARRIS, the Hon. ARTHUR STANLEY, M.P., and Mr. E. TENNANT. The association has its chief offices at 114 and 116, Victoria-street, Westminster, and a City branch office at 71 and 72, King William-street, London, E.C. The report says that "the Central Public-house Trust Association in its present form will have completed its work when it has laid the foundation of a public-house trust company in every county." The association invites subscriptions and donations. It publishes a balance-sheet which contains the following note: "There are liabilities, the amount of which has not been ascertained, in respect of secretary's salary, further printing, and the publication of the accompanying report and sundry other expenses." We should be glad if the executive committee would supply some information to elucidate this note. Do not the committee know the salary of

their secretary? Do not the committee get an estimate for printing before they give an order for it to be done? Do the committee consider it necessary to have two expensive London offices? And if so on what grounds? The officers of the association are, we firmly believe, thoroughly in earnest and desirous to do good in a matter of the greatest public interest which needs their help, and we think that they will see the importance of the questions to which we draw their attention and that they will admit that a successful business cannot be carried on without ordinary business precautions. The successful ventures which have hitherto been started have, as a rule, if not always, been either under the direct or indirect influence of a benevolent local autocrat or have been managed by men of business who have been fully acquainted with the wants and wishes of the inhabitants of the district in which the work was carried on. Their success has, no doubt, been due to their adaptation to local requirements.

The formation of these associations and their management have given rise to feelings of great anxiety in the minds of some. In a letter which was printed in the *Times* of Nov. 26th Sir EDWARD FRY expresses his regret that many of the trusts pay an interest of 5 per cent. to the shareholders, and he fears that the shares may be held by wealthy men, even "perhaps by wealthy brewers," and such shareholders, he fears, would care nothing for the cause of temperance. He thinks, moreover, that there is a probability "that attempts will be made by enterprising brewers and distillers to push the sale of their goods by bribing the managers of the reformed public-houses by means of a percentage on the sales." It may be inferred from this outspoken expression of misgiving that Sir EDWARD FRY has little faith in the honesty of the managers of trust public-houses and little confidence in the reality of the supervision which will be exercised by the directors of the companies. One point to which Sir EDWARD FRY calls attention must be specially alluded to. He insists that it will be a serious matter if justices of the peace become shareholders of the trust companies, as they would, of course, in that case be disqualified to act as licensing magistrates, and therefore the number of those who keep a watchful eye on the granting of licences will consequently be lessened. This is a fact which should be considered in all its bearings. Sir EDWARD FRY views with anxiety the application of some of the profits of the Hill of Beath Tavern, to which allusion has already been made. The "surplus funds" ought not, in his opinion, to be spent "in the immediate neighbourhood of their place of origin." Indeed, he is quite sarcastic on the matter, and says, "into what good things the people of the Hill of Beath will drink themselves in the future it will be curious to observe." Sir EDWARD FRY entirely agrees with the Bishop of CHESTER and with Earl GREY that the present state of public-houses is open to improvement, but he sees great danger in their proposed method of affecting it. It does not appear to have occurred to any of the distinguished people who desire to reform public-houses that the interests of those who use them should be primarily considered. The chief causes of differences of opinion amongst them usually have regard to the disposal of the large profits derived from the customers.

## Medicine and the Kitchen.

OF the arts which may be reckoned ancillary to that of medicine there is none probably which is so neglected by practitioners of medicine as that of cooking. Most medical men regard the kitchen as beneath their notice and would scout the idea that any special training in its materials and its methods might be of service to their professional powers and usefulness. Such an attitude of mind is as unwarranted as we believe it to be injudicious. Not only are there very many substances which are common to the kitchen and to the dispensary, a knowledge of which, therefore, is justified by their presence in one if it does not indicate an acquaintance with the other, but, moreover, rightly regarded, the kitchen and the cook play almost as important a part in attaining the aims of the medical man as do the druggist and the dispensary. With regard to both the physician is in the position of directing steps that can only be satisfactorily taken by loyal performance on the part of his subordinates. At the present day, when medical education is so largely scientific and theoretical, to an extent which if in some directions highly beneficial is in others certainly detrimental to the practical value of a practitioner's powers, an intimate acquaintance with the contents of a dispensary and the knowledge of how most efficiently to employ their various combinations may be sought in vain among a large proportion of highly educated and skilful medical men. As regards the humbler offices of the kitchen such knowledge is to be found at even wider intervals. Yet it is obviously of the greatest importance that if a physician orders a medicine he should be able to tell that it is duly dispensed. This cannot be unless he could dispense it if necessary himself, and conversely, a man familiar with dispensing will have far wider powers and more ingenuity and will apply drugs with more minute efficiency than one who prescribes without any such intimacy with the materials which he is recommending. A similar argument may certainly be applied to the products of the kitchen. Yet, if a large number of medical men may claim familiarity with drugs and the modes of dispensing them, few, we imagine, will assert an intimacy with the methods of the kitchen, or even to any large extent with materials which are used in it and the daily use of which they may have many times recommended. No medical man would ignore the importance of diet both in health and in disease, and the cook may well be regarded as a chief officer in the service of preventive medicine. It is, no doubt, in the daily provision of wholesome digestible dishes that the main function of the kitchen lies. No medical man nevertheless can afford to neglect its aid when he is reckoning up his therapeutic resources. More particularly to-day when the use of animal extracts in medicine has become so prominent should the importance of the kitchen be duly recognised. We do not hold the belief of an old writer, quoted in Dr. W. T. FERNIE'S "Kitchen Physic," who says that "the practitioner has only to direct such food as may contain the particles that his patient may stand in need of. For example, are the kidneys diseased? Then let him prescribe stews and broths made of ox-deer and sheeps' kidneys. Asthmas require dishes prepared from the lungs of sheep, deer, calves, hart, and lambs. Are

the intestines diseased? Then he should order tripe, boiled, fried, or fricasseed. When this practice has become general we shall be able to remove every disease incident to the human body by the assistance of the cook only." This writer evidently did not underrate the aid of the kitchen. Unfortunately, the art of therapeutics is no such simple affair as this. The recently proven value of the thyroid gland, however, in the treatment of myxœdema, to take only one striking instance, should lead us to take a close interest in the help that substances which may be most suitably prepared in the kitchen are able to afford us in the treatment of disease, and not to regard the kitchen simply as a place from which the provision of healthy food for healthy persons is all that can be desired or obtained.

If only on historical grounds, medical men should be interested in foodstuffs and their preparation. From the early times when the functions of priest and physician were united in the same man, and when votive offerings and therapeutic agents were alike prescribed and dispensed by his hands, the association of the culinary and therapeutic arts has been a close one. There is a fund of interest and of information in the old accounts of the various properties and powers with which writers from the earliest times invested different articles of diet. Thus, PLINY tells us that "CATO thinks that after eating hare sleep is induced, but the common people suppose that after such food the body is more lively and gay for nine days; this may be only an idle rumour, but, still, for so widespread a belief there must be some foundation." Whether there is any true foundation for such a belief or not an investigation into the exact chemical properties of flesh of various animals and into such articles of diet, for instance, as shell-fish, which are known to have peculiar effects upon certain people, would not only be of great interest but might lead to results of great therapeutic value. Such chemical work as this is a most fitting direction in which to turn some of the efforts of clinical laboratories such as are sure in the future to be more and more extensively employed in connexion with all large general hospitals. There are many widespread beliefs and theories with regard to the effects of different foodstuffs in health and disease. Exact knowledge on such points is scanty. We cannot doubt that in attempting to enlarge and to define it, direct or indirect results of importance and utility would be obtained. Why, for instance, are tomatoes in the popular mind so widely associated with the spread of cancer? We have no grounds whatever for believing the idea to have any reasonable foundation. Yet how much do we know of the special constituents of the tomato? Has it any therapeutic properties? Is it, as a matter of fact, particularly prevalent where cancer is especially common? Such questions and their solution are a natural adjunct to intelligent medical interest in the kitchen, and we have mentioned merely the crudest and most obvious of the many problems, therapeutic and pathological, that the kitchen suggests to us if we honour it with our attention.

There is another point of view from which the cook may be brought to the aid of the practical physician. Supposing that experiment were to show that drugs which now are used only in formally prescribed mixtures or pills were capable of introduction into the more welcome output of the domestic kitchen, how grateful an assistance might we obtain. It is often difficult when a medicine has to be taken frequently and over long periods of time to be sure that the patient does not grow careless or forgetful. If, however, instead of taking his draught before, or his pill after, his daily meals, that draught or that pill were, without altering the taste of the dish and without losing its own efficacy, combined with the patient's dinner instead of preceding or following it, we can imagine a far more certain acceptance on his part, and the physician's orders would be more consistently carried out by connivance on the part of the cook than they are with the coöperation of the chemist. Such a relegation of the dispenser's duties to the hands of the *chef* can only be achieved by familiarity on the part of the medical man with the work of both his subordinates. With the work of one he is, perhaps, fairly cognisant, with that of the other we strongly recommend him to become more intimately acquainted.

## The University of London and Preliminary Scientific Education.

AT a meeting of the Senate of the University of London held on Feb. 27th, 1901, the following motion was adopted:—

"That it be referred to the Faculty of Medicine to consider and report to the Senate as to the manner in which it may best carry out the duty stated in the following paragraph of Section 80 of the Statutes of the University, viz.: 'The Senate shall use its best endeavours, whenever practicable, to secure common courses of instruction for internal medical students in the preliminary and intermediate portion of their studies under appointed or recognised teachers at one or more centres.'"

The Faculty of Medicine accordingly appointed a committee to carry out the wish of the Senate. This committee was made up of 31 members representative of all the schools of the University, and as far as possible of all branches of medical study. The chairman was Mr. H. T. BUTLIN and the committee resolved itself into sub-committees the members of which took upon themselves the task of making inquiries in London and elsewhere upon the matter in hand.

On Dec. 13th the report of the committee was laid before the Faculty of Medicine. The report states that the facts collected on behalf of the faculty fully bear out the statement of the Statutory Commissioners, who framed Section 80 of the Statutes, that the present method of teaching causes a serious financial strain on the resources of the medical schools, and that senior teachers of preliminary and intermediate subjects are underpaid. A persistent decline in the numbers of London medical students is noted, and the committee considers that if London is to maintain her position as a leading centre of medical education some material alteration in the conditions of such education is greatly needed. The faculty, therefore, recommends:—

"That the Senate should take steps to secure funds to enable it to establish in the near neighbourhood of the University a school of preliminary and intermediate medical studies."

The faculty has no doubt that the success of such a school will be certain (1) if enough funds are forthcoming to provide ample educational facilities and adequate remuneration for teachers without increasing the cost of education to

the students; (2) if provision is made for teaching all classes of medical students whether preparing for the examinations of the University or of other qualifying bodies; (3) if due provision is made for research; and (4) if provision is made for the instruction of women students in an institution under the direct control of the University. The faculty, however, feels that if any school wishes to retain the teaching of preliminary subjects it should be allowed to do so subject to the control of the Senate. The report includes a tabulated statement of replies received from the medical schools upon the question of what may be termed a "concentration school." Most of the schools are in agreement with the idea of the Senate that there should be common instruction in preliminary subjects as far as regards chemistry, physics, and biology. With regard to the subject of anatomy the general consensus of opinion seems to be that it should continue to be taught at the separate schools attached to the hospitals. To the questions thus opened up we shall have occasion to return in the main, while upon many offshoots of them we have constantly stated our views. It is undoubted that London as a centre for medical education is not increasing in popularity. London should be preëminent as a medical teaching centre by reason, not only of her position as the capital of the empire, but because of her unequalled wealth of clinical material. So far, however, from her position being maintained it is actually being lost. Seventy years ago the London medical man's teaching was considered hardly complete unless he had been to Paris or Vienna, and at about the same date Edinburgh was far ahead of London as a teaching centre. Since then London has made enormous progress, but the progress has begun to show signs of arrest. The London medical student is at a disadvantage in more ways than one: firstly, he cannot obtain a degree upon reasonable terms; and, secondly, the expense of living in or within reasonable distance of London for the term of five years which is now required is very high. The medical schools of the metropolis are feeling the effects of these two causes with the result that the number of students is lessened, while the teachers, especially of the preliminary subjects, do not receive anything like a proportional remuneration for their time and trouble. A "concentration school" would, no doubt, mean increased economy, but would it also mean diminished efficiency? This is the crux of a matter the numerous aspects of which deserve close attention.

# Annotations.

"Ne quid nimis."

## THE METROPOLITAN WATER-SUPPLY.

THE *Times* of Dec. 14th, gives a report of a "smoking concert" which was held on the previous evening at the Whitehall Rooms of the Hôtel Métropole in connexion with the sixteenth annual meeting of the metropolitan division of the National Union of Conservative and Constitutional Associations. Mr. Walter Long, M.P., President of the Local Government Board, was present at the meeting and at a "smoking at home" which was held later in the evening. At these festive gatherings the question of the metropolitan water-supply was discussed. It is necessary, therefore, that we should briefly refer to them. At a business meeting which preceded the "smoking concert" a report was submitted which referred to the last election of members of the London County Council. The fact that it resulted in a large Progressive majority was attributed to the apathy of the electorate and to the misrepresentations of the Progressive party. How far these two explanations tally, it is unnecessary to discuss. Neither explanation agrees with the one which has been clearly expressed in these columns. It may at the present juncture be worth while to recall the fact that just before the election the metropolitan water companies attempted to force on the people of London the adoption of certain regulations in regard to water-fittings. These regulations were of a character which called for, and received, universal condemnation except from those who were financially or sentimentally interested in the water companies. The people of London generally became aware of a fact which had long been known to those who had studied the question—the fact that active "wire-pullers" amongst the Moderate party were more interested in the water companies than they were in the welfare of the people of London. We gladly welcomed this spread of knowledge and its natural result—the complete defeat at the polls of a party which it was evident would not act in the interests of the London water consumers. It cannot be too clearly understood that THE LANCET has not, and does not take, any part in politics or in municipal politics, except in so far as they affect the public health, and in the matter now under consideration whilst we rejoiced at the well-merited defeat of the Moderates on the London water question we did not, and we do not, approve the attitude of the Progressive party with regard to the matter, but, on the contrary, we maintain that the question is one which can only be settled satisfactorily by taking into account the wants and interests of the inhabitants of a much larger district than that which is included in the County of London. At the "smoking at home," to which we have referred, we are glad to see that Mr. Long with respect to this matter took the view which has been consistently advocated in these columns. "A satisfactory settlement of the water question would," he said, "be a great advantage to London as a whole." It cannot, however, be said that he indicated what he understood by a satisfactory settlement, and he appears to have been facetious, or, at any rate, to have excited the laughter of the audience by referring to the state of uncertainty in which the public is still kept as to the provisions of the Bill which the Government is to introduce. According to the *Times* report, Mr. Long said that "he augured very good results to the Bill from the reception with which his proposals had been received *so far as they were known*, and he gathered that the knowledge upon them was not very accurate." Any knowledge which the public at present has as to the provisions of Mr. Long's Bill is derived from his own statements and from the *précis* of the Bill which was communicated to the *Times*. If these statements are not accurate it is needless to discuss them and useless to dwell on the vague generalities with which Mr. Long instructed or amused his followers. We will therefore allude to one point only to which he referred—a point which may prove of importance to Mr. Long and to the Government of which he is a member. Having assumed that the purchase of the metropolitan water companies' undertakings would be a good thing—an assumption, we may again point out, which may be proved to be groundless—Mr. Long is reported to have said that he believed that the provisions of the Bill which he would introduce "would convince Parliament that they were an honest attempt to act justly as between the vendors and the purchasers, although he did not believe either side would regard them as meeting all

their requirements." This curious statement certainly does deserve a moment's consideration. Mr. Long thinks that Parliament will pass his Bill. He also thinks that the metropolitan water consumers will not regard the Bill as meeting all their requirements. In brief, Mr. Long thinks that Parliament will pass a Bill which will not fulfil the requirements of those for whose benefit it is professedly passed. Is it not possible that Mr. Long relies too much on the "apathy" of the people of London?

## SMALL-POX IN LONDON.

THE returns of small-pox in London since our last issue are as follows. On Saturday, Dec. 14th, there were 29 new cases notified and removed; on Sunday, the 15th, there were 14 new cases; on Monday, the 16th, there were 35 new cases; on Tuesday, the 17th, there were 32 new cases; and on Wednesday, the 18th, there were 21 new cases.

## THE SITUATION AT THE MACCLESFIELD INFIRMARY.

WE announced last week that matters at Macclesfield Infirmary with reference to the appointment of a female junior house surgeon were at a deadlock. Miss Clarke, the junior house surgeon elected by the governors, refused to resign when the governors desired to fall in with the views of the medical staff; while the medical men refused to withdraw their resignations save under certain provisions. These provisions have now been made public and are as follows: (1) the selection of resident medical officers to be left in the hands of the honorary medical staff; and (2) the services of the present junior house surgeon be dispensed with from Jan. 15th, 1902. A letter has been sent to the governors of the hospital by the medical staff saying that only if these provisions are granted can they withdraw their resignations, but they promise that in the interim they will do all in their power to prevent any patient from suffering from lack of needful medical attendance. The medical staff state that they cannot agree to the continuance of the present arrangement—under which it would seem that they discharge their obligations, in spite of their wishes having been totally disregarded—for any further period, since they believe that such would be prejudicial to the interests of the institution and of the patients. They therefore have requested the governors to understand that they cannot be responsible for the care of patients after Jan. 15th next except under the conditions which they have stated. We do not see how the medical staff could possibly have come to any other conclusion whatever, and we trust that in spite of the industrious misrepresentations of their action which have been circulated they will maintain their attitude. It is, in our opinion, absurd to say that the whole question of the right of women to use in practice the medical degrees and diplomas that they have gained in examination is at question. Miss Clarke, we are informed, has refused to resign because she is standing for a principle, but, as far as we can see, the principle for which she is stated by certain journals to be making a gallant fight is not involved. The question at issue at Macclesfield is whether the medical staff of a public institution, having thoroughly made up their minds that there are circumstances which make it unadvisable to appoint a female resident officer to work under them, should be ordered by the governors to pocket their convictions. We publish in another column a letter from a well-known and highly respected member of the medical profession who dwells a little in detail upon a side of the matter to which we have barely alluded, but it is a side which has been mentioned by the lay papers published in Macclesfield and the neighbourhood. "X" is not the only medical man who could bring forward evidence that it is sometimes inexpedient for resident medical officers to be of opposite sexes. Quite apart from the cruelty to a certain class of male patients in a general infirmary that is involved in cutting them off from communication with their own sex during what may be called sexual troubles, there is the question of domestic convenience. Some of those who know the internal organisation of the Macclesfield Infirmary do not consider that it is quite seemly that one of the resident medical officers should be a female. The governors do not seem to mind this, if they have ever debated it, while the medical staff for obvious reasons of delicacy do not allude to the point. But there are supporters of the infirmary who view the matter in this light and therefore agree with the medical staff, even while being as fully in accord with the aspirations of women as the governors and while thoroughly believing that in a suitable sphere the female medical practitioner may be a boon to her generation.

## THE ROYAL INSTITUTION OF GREAT BRITAIN.

AMONG the Friday evening lecturers at the Royal Institution of Great Britain are Lord Rayleigh who will take for his subject on Jan. 17th "The Interference of Sound"; Mr. H. G. Wells, B.Sc., who will deal on Jan. 24th with "The Discovery of the Future"; Professor A. Crum Brown who will discuss on Jan. 31st "The Ions of Electrolysis"; Professor Arthur Gamgee who will discourse on Feb. 7th on "Physico-Chemical Researches on the Blood-Colouring Matter"; and Professor H. Becquerel who will deliver in French on March 7th a lecture on "Radio-Active Bodies." After Lord Rayleigh's discourse on Jan. 17th the Duke of Northumberland, who is the President, will unveil and present to the Royal Institution on behalf of the subscribers a bust by Mr. Onslow Ford of Sir Frederick Bramwell, Bart., honorary secretary of the institution from 1885 to 1900. On Tuesdays, Jan. 14th, 21st, and 28th, and Feb. 4th, 11th, and 18th, Dr. Allan Macfadyen will lecture on the "Means of Offence and Defence of the Cells in Relation to Immunity," and on Tuesdays, Feb. 25th and March 4th, Mr. William Napier Shaw, F.R.S., will lecture on "The Temperature of the Atmosphere."

## TYPHOID INFECTION WITHOUT TYPHOID FEVER.

BACTERIOLOGY has shown that the specificity of the infective diseases depends neither on their clinical evolution nor on the lesions produced, but on the pathogenic agent, and has, therefore, singularly modified nosology. Typhoid fever is a striking example. Its well-defined clinical and pathological features appeared to furnish all that was necessary to constitute "a disease." But they have been shown to be but some of the effects produced by a specific organism—Eberth's bacillus—which may infect the whole system may attack a particular tissue or organ either at the time of the fever or even years afterwards, giving rise to the so-called complications and sequelæ. A further step, which the discovery of Widal's reaction has facilitated, is the recognition of the fact that a lesion may be produced by the typhoid bacillus quite independently of any illness such as typhoid fever. Thus Dr. Cushing has recorded a case of cholecystitis in which cholecystotomy was performed and the typhoid bacillus was found in the gall-bladder and in which the blood gave the typhoid reaction,[1] although there was no history of typhoid fever. The gall-bladder appears to be, like Peyer's patches, a site of election of the typhoid bacillus.[2] At the meeting of the Société Médicale des Hôpitaux of Paris on Nov. 29th M. Fernand Bezançon and M. A. Philibert related the following case. A woman, aged 28 years, who had been exposed to much privation, entered hospital on Sept. 11th, 1901. She was

[1] Johns Hopkins Bulletin, May, 1898.
[2] See THE LANCET, July 9th, 1898, p. 96, and June 17th, 1899, p. 1648.

pale, feeble, and emaciated; the temperature was 104° F. There was no diarrhœa, enlarged spleen, tenderness, or gurgling in the iliac fossa, or rose-spots. She complained of headache but had not the typical typhoid face; her appearance rather suggested tuberculosis, but there were no signs of that disease. On the following morning the temperature fell to 100° and the patient felt better. But in the evening the temperature rose to 102·8° and rigors began; they continued during the whole night. Next morning there was a slight remission (102·5°); in the evening the temperature rose to 102·8°. On the 14th the morning and evening temperatures were respectively 103° and 104·3°; on the 15th they were 103·6° and 105°. The temperature chart, in spite of the absence of other symptoms, suggested the diagnosis of typhoid fever, which was confirmed by the diazo-reaction and Widal's test. On the 16th a tender tumour was discovered, which was evidently the distended gall-bladder. On the 17th (the seventh day of the disease) the temperature, instead of maintaining its level, fell to 103°, and on the 18th to 100°. On the 19th a large greenish liquid stool was passed, the temperature fell to 99·3°, and the gall-bladder was smaller and less tender. Recovery followed. This case appears to be an example of typhoid cholecystitis without the ordinary lesions or symptoms of typhoid fever. Cases of lesions due to the typhoid bacillus without typhoid fever have been but rarely observed. The following are some examples. M. Kelsch has recorded a case of hæmorrhagic pleurisy in a tuberculous subject, M. Fernet a case of serous pleurisy, and M. Guinard a case of appendicitis. Intermediate cases have been described. Thus M. Fernet has recorded a case of typhoid meningitis in which during the whole course the symptoms were those of meningitis and in which the intestinal lesions found after death were very slight. Cases of general typhoid infection (typhoid septicæmia) without intestinal lesions have been described by several writers. Finally, the recent researches of Læsener, Reinlinger, Schneider, and Chantemesse have shown that the typhoid bacillus may be simply a saprophyte and occur in the stools of healthy persons. Thus in the case of the typhoid bacillus, as in that of other microbes, the simple "germ theory of disease"—that the invasion of the organism by the microbe determines the disease—must give place to a more complex conception. Predisposing causes are necessary. According to these causes, according to the state of the viscera, a general typhoid infection without intestinal lesions (typhoid septicæmia) or with intestinal lesions (typhoid fever) or a local typhoid affection results.

## TREATMENT OF PLAGUE.

WE have received a copy of a report on the treatment of plague with Professor Lustig's serum at the Arthur-road Hospital, Bombay, by Khan Bahadur Dr. W. H. Choksy, special assistant health officer, Bombay Municipality. The pamphlet affords interesting reading. A brief *résumé* is first given of recent researches in bacterio-therapy, and then the principal characteristics of the epidemic of 1900–1901 are detailed. These are stated to be as follows:—(1) Rapid extension of the local infection with multiple contagious buboes; (2) intense and rapid septicæmia; (3) irregular course, prolonged duration, frequent relapses due to re-infection or extension, indolent buboes remaining enlarged for a long time or suppurating very late, and numerous complications; (4) tardy convalescence, or marasmus from secondary infections, or death from plague pyæmia and consequent toxic degenerations of the internal organs; and (5) greater resistance to the action of serum. The results of the serum treatment were not so satisfactory as in previous years. Dr. Choksy ascribes the partial failure to the peculiarities of the epidemic which are mentioned above, especially the marked tendency to re-infection and the large number of septicæmic cases. Factors had to be contended with which were practically non-existent previously, and he believes that if another epidemic occurred of the same nature the results would be the same, unless, indeed, it were possible so to perfect the serum as to make it effective against general blood infection. From August, 1900, to February, 1901, the serum treatment was conducted on the selection method. As no serum was available in February only five persons were treated with it. During the seven months comprised in the above period 52 patients were treated with the serum, of whom 35 died and 17 recovered. The non-serum cases numbered 162, and 125 of them died and 37 recovered. The mortality-rate in the former was therefore 67·30 per cent., as against 77·16 per cent. in the latter. Dr. Choksy adds that the difference in the mortality-rate between these two sets of cases would have been greater had there been sufficient serum in February to treat all the cases that were deemed suitable for serum treatment. The results in March, April, and May were as follows: out of 104 patients treated with the serum 81 died and 23 recovered, whereas out of 102 not so treated 81 died and 21 recovered. The mortality-rate therefore works out at 77·82 per cent. in the former and 79·42 in the latter. The unsatisfactory results are due to the number of septicæmic cases which presented themselves, for out of 57 such patients treated with the serum only two recovered, whilst out of 76 non-septicæmic cases 33 recovered. It would appear, therefore, that in the latter class of case the serum has yielded good results, whilst if the patient comes under observation in the septicæmic condition he has practically no chance of recovery.

## THE FIRST ANNUAL MEETING OF THE NORTHUMBERLAND AND NEWCASTLE MEDICAL ASSOCIATION.

IN the month of November last year the Northumberland Medical Association, which had been founded in the previous August, amalgamated with the Newcastle and District Medical Ethical Society. The object of these organisations and the causes that brought them into existence and led to their union under the title of the "Northumberland and Newcastle Medical Association" have been described at some length in THE LANCET.[1] We have now received the first annual report of the new body. The information contained in this document is encouraging from every point of view. Though the association is only a year old it boasts of 171 members, and a considerable number of the younger members of the medical profession who have not yet formally joined it have, at all events, promised not to oppose its objects. Consequently rather more than half of the medical men who practise in the county have already been won over to this medical union. Nor has the work done been merely that of organisation. From close upon 30 different districts applications have been made on behalf of medical men engaged in contract work, and an advance in payment has been obtained in all these cases with but one exception, and in this case the negotiations are still pending. This great success is due to the fact that no action was taken before all the medical men practising in the district had signed an engagement by which they pledged themselves to support the association throughout. But there are two other causes to explain the success achieved. First, the association created an indemnity fund so that any member who suffered in consequence of any action which he had taken at the request and on behalf of the profession would receive compensation. In actual practice there has been but very slight call upon this indemnity fund. The fact of its existence seemed to suffice to secure that unanimity which ensures victory, and thus there were but few victims. The second cause of

[1] See THE LANCET, Feb. 23rd, p. 581, and March 2nd, 1901, p. 665.

success is the voluntary work of the president (Mr. J. Rutherford Morison), the treasurer, and the members of the various committees. Many of these gentlemen have no personal interest whatsoever in the questions at issue; they have no contract work or club practice, and they have only given their assistance because they are actuated by the altruistic conception that each member of the profession, whatever may be his individual position, should take part in all movements that tend to raise the standing and dignity of the profession as a whole. Thus, the organisers have zealously given advice and assistance to medical men who have encountered difficulties in their practice, and in most cases this has prevented contests that were threatening. For such purposes they have attended numerous meetings of workmen, they have received deputations and committees representing various sick funds, they have spoken and argued, discussed and persuaded, and thus finally arrived at friendly agreement. Then there have been much correspondence and what was, perhaps, most difficult and discouraging, much canvassing of medical men themselves. To be obliged to devote a great deal of time and energy to induce medical men to attend to their own interests is certainly irritating, yet that is the main difficulty. Each member of the profession, says the report, should coöperate because the benefits attained by one section are reflected upon the whole. Then the report adds: "It is not too strong a deduction to make from the fact that this association has done so much in so little time that were the whole of the medical profession in the county to join our ranks we could secure practically any desirable reform." Yet close on half the medical practitioners of the county still stand outside the ranks of the union. The Northumberland and Newcastle Medical Association is so ably managed and successfully organised that there is no excuse for the practitioners of the county to withhold their support. All should join and join at once.

## THE CORTICAL REPRESENTATION OF THE FUNCTIONS OF THE STOMACH.

Dr. Paul Sollier and Dr. Henry Delagenière contribute to the *Revue Neurologique* of Nov. 30th an account of a case of local injury to the brain which appears to throw light on the question of the cortical representation of the stomach. The researches of Openchowski and his pupils and of Bechterew have shown that in animals there are present cortical centres which preside over the functions of the stomach and intestines. In the human brain it has not hitherto been possible to localise the centre for the stomach. Dr. Paul Sollier in the course of a research into the cortical representation of the visceral functions in hysterical subjects located the "stomach centre" in the middle portion of the superior parietal lobule, the principles and methods employed in the study being detailed in a previous article [1] by the same author. The case recorded below now furnishes the anatomical data necessary to corroborate the localisation propounded. It was that of a boy, aged 11 years, who received a wound in the parietal region of the skull from a pickaxe on May 30th, 1900. He lost consciousness and remained helpless and in a comatose state for a week after the accident. Respiration was slow, at the rate of 12 per minute, the pulse was small and accelerated to 108 per minute, and the temperature was elevated. The wound was the seat of a free and abundant suppuration. There was relaxation of the vesical and anal sphincters. An operation was performed on June 7th and after the application of the trephine two or three fragments of bone were removed. An abscess cavity was now seen involving the brain-substance to the depth of 5½ centimetres (2¼ inches), the shape of the cavity being conical with its base at the surface of the hemisphere, measuring 6 by 4½ centimetres (2¾ by 1¾ inches). This cavity was drained of its contents, light tampons of sterilised gauze were packed in, and further drainage was secured by means of small tubes. The temperature and pulse fell to normal on the fourth day after the operation and the patient's condition improved for a while. He could swallow with difficulty, and on the sixth day he emerged from the state of coma and seemed to regain consciousness. He could not reply to questions but he swallowed with avidity everything that was given. The next day he uttered a few words demanding food, and devoured greedily what was given. He could now give replies as to his accident but relapsed into a state of slumber from which he from time to time emerged only to ask for more food. He consumed broths, eggs, meat, and all foods and digested them with equal facility. This excessive hunger (bulimia) became more marked during the next few days and to avoid gastric troubles he was now given four regular meals a day. He continued to improve but his voracity persisted. It was noted that marked right hemiplegia was present after the operation. The paralysis was at first flaccid, but eventually contractures of groups of muscles began to develop. Passive movements and regulated exercises were now adopted for the affected limbs and with perseverance a considerable degree of power of movement was regained. The scalp wound was now completely cicatrised. Bulimia still persisted, and this was looked upon by Dr. Sollier as due to irritation of the gastric centre in the parietal lobe from its proximity to the wound which lay just in front of the middle portion of the superior parietal lobule.

[1] Revue Neurologique, 1900, pp. 101 and 365.

## THE LEECH MEMORIAL FUND.

A MEETING of the subscribers to the Leech Memorial Fund was held on Dec. 11th, at the rooms of the Manchester Literary and Philosophical Society, with Alderman Thompson in the chair. The report of the committee, which was read by the secretary, stated that the sum of £1251 12*s.* 6*d.* had been received from 152 subscribers. Of this amount £1000 had been paid to the Owens College on condition that the money should be called the "Dr. Leech Memorial Fund"; that the income and such portion of the capital sum as the council of the college may from time to time think fit, should be applied for the immediate maintenance of the professorship in, and for promoting the study of, materia medica and therapeutics in the Owens College; and that the chair should bear the name of Dr. Leech. The money on these conditions has been gratefully accepted by the council of the college with the desire that its best thanks should be conveyed to the subscribers to the fund. Out of the balance remaining a portrait in oils of the late Dr. D. J. Leech has been commissioned for presentation to the council of the Owens College, and it was also proposed, if sufficient funds are available, to have another portrait executed as a bronze medallion to offer to the board of management of the Royal Infirmary, Manchester, to which hospital Dr. Leech was honorary physician for over 20 years. The report was adopted unanimously and the committee was instructed to carry out its proposals and to issue a balance-sheet and final report to all the subscribers when the fund has been closed.

## THE NEW MEDICAL OFFICER OF HEALTH OF JOHANNESBURG.

JOHANNESBURG, after having, in common with many other towns in South Africa, passed through a period of storm and stress, is now returning to a normal condition. Week by week more stamps are being set up in the mines and civil life is being again entered upon. The latest development is the appointment of a medical officer of health of the town as distinct from the medical officer of the

colony, and we learn with great pleasure that the medical man elected to this responsible post is Dr. Charles Porter, the county medical officer of Shropshire. Dr. Porter, who was for some time medical officer of health of Stockport, graduated with honours as M.D. of the Royal University of Ireland in 1889. He received the Diploma in Public Health from the University of Cambridge in 1891 and is a barrister-at-law and a member of Gray's Inn. In Johannesburg he will find plenty of scope for the abilities which he possesses. The salary is to be £2000 per annum, with assurances as to fixity of tenure and other important matters, while he is to be distinctly chief of the health department and independent of the medical officer of health of the Transvaal Colony. The municipality wish him to organise and control the native quarters outside the town, to frame a sanitary code, to improve the public water-supply, and to investigate the prevalence of typhoid fever and pneumonia. We congratulate both Johannesburg and Dr. Porter upon this appointment, and wish him every success in the performance of his arduous duties.

## THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Cape of Good Hope received at the Colonial Office on Dec. 12th states that for the week ending Dec. 7th the cases of plague in the Cape Peninsula numbered 0. At Port Elizabeth the cases of plague numbered 1, a native. The deaths from plague were as follows: coloured persons, 1; natives, 1. In all other places the cases of plague were as follows: Europeans, 1; coloured persons, 1. The deaths from plague numbered 0, and there were no cases in persons under naval and military control. At Mossel Bay 2 further cases of plague have occurred during the week, and 2 cases of suspicious disease have occurred at Ladysmith in persons who have recently come from Mossel Bay. As regards the Mauritius, a telegram from the Governor received at the Colonial Office on Dec. 13th states that for the week ending Dec. 12th there were 42 cases of plague, of which 25 were fatal.

## THE SECOND REPORT ON THE CONCENTRATION CAMPS IN SOUTH AFRICA.

IN THE LANCET of Nov. 23rd, p. 1435, we referred to the first blue-book which was issued dealing with the subject of the concentration camps in South Africa. The mortality in these camps is undoubtedly very high and the disease most responsible for the death-rate is measles. Measles is a disease which is always attended by a very high mortality-rate in young children and is about the only zymotic disease which is unaffected by sanitation. Even in England and Wales the mortality-rate of measles has steadily increased since the 10 years, 1871–1880, whereas the mortality from other zymotics except diphtheria and whooping-cough has markedly decreased. The form of disease prevalent in these camps is of a peculiarly malignant type and owing to the difficulties in sanitation which always accompany a crowded population other diseases such as pneumonia have had a high rate of mortality. In continuation of this first report we have received a second blue-book, issued on Dec. 14th, dealing mainly with the new policy of breaking up the larger camps into smaller ones. The mortality for October and November remains regrettably high, but the difficulties with which the authorities have to contend are enormous. Stationary camp life is necessarily unhealthy, and when the habits of the refugees are considered it is a wonder that the mortality has not been higher. They are extraordinarily ignorant, and being in the habit on their lonely farms of disposing of every kind of slops and refuse in the immediate vicinity of their houses they continue this custom in the camps. When the camps were first formed they refused to use latrines and instead used the space around the tents. While this sort of custom has to be contended with it is almost hopeless to expect that even a camp of only 500 persons will show a satisfactory state of matters.

## PRESENTATION TO PROFESSOR LIVEING.

THERE was a large gathering of subscribers and lady friends in the hall of St. John's College, Cambridge, on Dec. 7th, when a portrait of Professor G. D. Liveing, painted by Sir George Reid, was presented to Professor Liveing as part of a testimonial in recognition of his valuable services to science. A photographic reproduction of the portrait is to be sent to those subscribers who may desire to receive one, and a bronze bust, to be designed by Miss Edith Bateson, will subsequently be placed in the Cambridge Chemical Laboratory. The Master of Trinity, who made the presentation, said that when future students came to ask the history of some of the worthies whose portraits adorned that hall, and in particular that of Professor Liveing, they would be told that it recorded the memory of an almost perfect student life, of the affection of troops of friends, and the grateful pride of that University.

## THE CONTROL OF SMALL-POX.

PROFESSOR KOCH, in the remarkable address which he delivered before the British Congress on Tuberculosis, raised more than one point of a controversial nature. But there are few epidemiologists who would not be prepared to accept without demur his contention that the experiences of the past has taught us that there is no one method of prevention which is equally applicable to all diseases. We have, for instance, learnt that the best mode of attacking malaria is to devote attention to the mosquitoes which are the active agents in its spread; that cholera and enteric fever may be best controlled by paying attention to our water-supplies; and that with respect to tuberculosis the destruction or disinfection of the infected sputa is, pending the report of the Royal Commission on Tuberculosis, the royal road to success. At present London is much troubled with small-pox, and there may be advantage at this juncture in asking how far small-pox is a disease which lends itself to a prophylaxis of its own. There is in certain quarters a tendency to deal with small-pox as with a disease against which we possess no special prophylactic means, such as vaccination and revaccination—to treat it, in a word, as we might typhus fever or yellow fever, and, in addition, to expend large sums of money on the "quarantining" of contacts, on international notification, and such like. These measures may be very useful auxiliaries, but it appears to us that in regard to small-pox prevention they are forced into too great prominence, whereas the true prophylactic, that of vaccination, tends to be relegated to a somewhat secondary position. If, in addition to the special prophylaxis other expenditure such as is incurred in connexion with disease against which no preventive "vaccine" has been discovered has to be provided for, we are tempted to ask, What is the use of our State-regulated system of vaccination? Those of us who believe that recent and efficient vaccination is a sufficiently certain protection against small-pox, and who are content to take our risk on this understanding, feel inclined to object to expenditure upon subsidiary measures which can most usefully be practised in the case of diseases against which science has, as yet, provided no special prophylaxis. We who have every faith in the protective power of recently-performed vaccination feel that as a matter of personal selfishness it is absolutely immaterial whether or not those around us hold the same faith. And hence we may naturally object to

a sort of double expenditure—i.e., on vaccination and "quarantine." By all means let a sharp look-out be kept upon those who have been exposed to infection, and in special instances even the "quarantining" of contacts may be desirable; but above all, and primarily, let them be vaccinated or revaccinated, as the case may be, and let their clothes and other effects be disinfected by modern methods. If the machinery for obtaining information is incomplete or unsatisfactory let it be improved. Let varicella be notified in order that we may be in a position to ascertain the existence of small-pox cases, and let us insist, by legislative means if necessary, that vaccination, whether by public vaccinators or by private practitioners, shall be efficiently performed. Let us, too, provide medical men with a special knowledge of the manifestations of small-pox to aid the medical practitioner in cases of doubt. Last, but not least, let us place the medical officer of health in a position to enable him to obtain all such information as is necessary for the proper carrying out of his important functions. In this last connexion there is need for increased statutory powers, as is well illustrated in a recent report by Mr. A. E. Harris, the medical officer of health of the borough of Islington. In this instance the occupier of the house in which a case of small-pox had occurred placed every obstacle in the way of the borough officials who endeavoured to ascertain the names and occupations of the inmates of the invaded house. The occupier in question withheld from the sanitary inspector the important fact that her niece was a pupil teacher in a private school, and another inmate of the invaded house refused to divulge the nature and address of the business in which she was employed. Mr. Harris suggests that the withholding of information such as this should be an offence punishable at law, and we quite concur in the view that the matter should be brought to the notice of the Local Government Board, with the object of a clause being inserted in the next Public Health Act to remedy this undesirable state of affairs. There will, too, doubtless be advantage in there being a closer touch between laundries and the health authorities, so that the spread of the disease by these channels may be prevented or controlled. And certainly persons who have been exposed to the risk of infection should be visited at their homes during the incubation period, even daily visits being paid towards the expiration of the 12 days' incubation. But we have grave doubts whether the very small additional advantages which might be thought of as being gained by isolating contacts in "quarantine" establishments would be at all adequate to the trouble and expense which such a measure would entail. Moreover, we know from experience that inspection at the homes of those exposed is often all that is found to be practicable.

## AN ITALIAN PHYSICIAN ON THE SOUTH AFRICAN WAR.[1]

"How will you be able to write about Spain after you have been there?" asked Heinrich Heine of Théophile Gautier, who was starting for that country. The deadly, if delicate, rebuke administered to the French *feuilletoniste* by the "Aristophanes of Germany" might have been the motto of Professor Ruata in the well-informed and trenchant remonstrance which he has addressed to his compatriots. "Boeritis," it is just to say, has hardly assumed the virulent form in Italy that it has taken in other countries; indeed, it is only of late that she has, among a section at least of her population, allowed herself to be influenced by the epidemic of calumny which has pervaded continental Europe against England's conduct of the South African campaign. But that section makes up in noise and persistence for what it lacks in knowledge and impartiality, and so the able and accomplished occupant of the chair of Materia Medica in the Umbrian School has prescribed an "alterative" in the form of a recapitulation of the facts, which, however unpalatable to the patient, must end in his recovering the healthy tone that he ought never to have lost. Professor Ruata, indeed, is doing for his compatriots what has been done for theirs by MM. Yves Guyot and Cornély in France, by the "Old Berliner" in Germany, and by MM. Naville and Jallichet in Switzerland: he has assumed with Madame de Staël that if "the judgment of foreigners" is to be really "the verdict of a contemporaneous posterity," that judgment must have the data put fairly and fully before it and must reinforce the "detachment" of the umpire with the "inspiration" of the eye-witness. The result is one of the clearest and most cogent vindications of British policy and British procedure in South Africa yet published—an *opuscule* which must add to the author's already high reputation as a truth-loving, painstaking, and public-spirited investigator.

[1] Il Conflitto Anglo-Boero. Appunti del Prof. Carlo Ruata dell' Università di Perugia: Tipografia dello Stabilimento S. Lapi, Città di Castello, 1901.

Mr. George Lenthal Cheatle, C.B., F.R.C.S. Eng., has been appointed surgeon to the Italian Hospital, Queen-square, W.C.

# Pharmacological Notes.

### ADRENALIN.

ADRENALIN, the active principle of the suprarenal glands, has been isolated in a pure form by Dr. Jokichi Takamine, who has published an account of his work.[1] This substance has the approximate composition represented by the empirical formula $C_{15}H_{15}NO_3$, but its chemistry has not yet been completely worked out by its discoverer. It occurs in light, white, microscopic crystals, has a slightly bitter taste, and leaves a numb feeling on the tongue where it has been applied. In dry form it is perfectly stable. It is soluble with difficulty in cold water but more readily in hot water, forming a slightly alkaline solution. It is easily soluble in acids and in alkali hydroxides, forming salts; such solutions readily oxidise on exposure to air. The physiological properties of adrenalin have been practically tested on dogs by Dr. E. M. Houghton of Detroit, who finds that a fraction of one drop of aqueous solution of adrenalin, or its salt, in the strength of 1 in 50,000, blanches the normal conjunctiva within one minute. It is a strong hæmostatic. The intravenous injection of adrenalin produces a powerful action upon the muscular system in general, but especially upon the muscular walls of the blood-vessels and of the heart, resulting in an enormous rise of blood-pressure. The result of three intravenous injections of one cubic centimetre of the solution of adrenalin chloride, 1 in 100,000, into a dog weighing eight kilogrammes, raised the blood-pressure 30 millimetres of mercury. This and other experiments indicate that adrenalin is over 1000 times stronger than the fresh glands. The therapeutic applications are already numerous. Generally speaking, when locally applied it forms a powerful astringent and hæmostatic; it may be used in various forms of inflammation and it is also a cardiac stimulant. It is said to be non-irritating, non-poisonous, non-cumulative, and without injurious properties. As an antidote it has been used with good results in morphine- and opium-poisoning, also in circulatory failure, in the prevention of collapse in anæsthesia, and in carrying out bloodless operations in the nose, eye, ear, and throat. It has also given good results in some cases of deafness, hay fever, nasal hæmorrhage, and in various forms of heart disease.

### DIGESTIVE FERMENTS IN SURGICAL PRACTICE.

The local application of digestive ferments to dissolve the

[1] American Journal of Pharmacy, 1901, p. 523.

coagula and putrescent matter found in lesions or the products of morbid changes in the living human organism is not new. Of such ferments that obtained from a South American species of papaw has been used extensively, according to M. J. Wilbert.[2] Preparations from the milky juice of the plant have been recommended to dissolve the false membrane in diphtheria and externally to aid in cleaning out disagreeable sloughing ulcers by dissolving the broken-down granulations and albuminous exudate that offer both shelter and food for colonies of micro-organisms. The latter use is an old one and is borrowed from the practices of savage races—indeed, the native South American practitioners use a paste made up with the juice of the papaw as a dressing for foul ulcers and offensive sores such as occur among the natives in hot climates. Hitherto the difficulty has been experienced that the keeping of fluid preparations of this drug has resulted in the impairment of the active principle. It is suggested with some reason that any solvent capable of attacking and destroying necrotic tissues without injuring the surrounding healthy cells offers advantages over corrosive or poisonous antiseptics or caustic washes or the use of the curette with its attendant pain. The following formula shows the composition of a solution of the ferment pepsin which has been so used for some time and has given satisfaction in the German Hospital, Philadelphia. It is called "physol" (a corruption of the words "physiological solution") and contains the following proportional parts: pepsin (U.S.P.), 50; menthol, eucalyptol, oil of wintergreen, of each 0·5; alcohol, 10; diluted hydrochloric acid, 20; glycerine, 50; and distilled water to make 1000. 50 parts of talc are used to clear the solution by filtration. The product is a clear, light yellow, pleasantly aromatic solution that appears to keep without any appreciable change in its peptonising properties. Pepsin has the advantage over papaw that it is more easily obtainable and is better capable of being kept in solution. Physol is mixed with two or three times its volume of water and applied as a wet dressing; it has given excellent results by removing the broken-down granulations and other septic materials from old chronic ulcers and abscesses, leaving a healthy granulating surface that may be treated as a clean wound in the regular way.

### IMMUNITY OF HEDGEHOGS TO CANTHARIDES.

Hedgehogs, according to Alexander Ellinger,[3] are immune to the toxic action of cantharides. Horvath has known a hedgehog to eat 30 grammes of live cantharides, containing 10 centigrammes of cantharidin, during 24 hours without suffering the least harm. This is a large dose compared with that which a human being can tolerate; thus, a fifth of a milligramme causes albuminuria in a human adult, whilst two centigrammes constitute a lethal dose. Ellinger finds that the lethal dose for a hedgehog is 10 centigrammes by intravenous injection, and that a dose of two centigrammes has no effect on the animal's kidneys. These organs are capable of eliminating large quantities of cantharidin without causing any organic lesion. The cantharidin so excreted retains, however, its toxic action on other animals. It is interesting to note that the skin of the hedgehog is susceptible to the irritant action of cantharidin.

## THE PLAGUE IN INDIA.

BY ALEX. GRAHAM-SIMPSON.

### II.—THE BOMBAY PLAGUE LABORATORY.[1]

STRANGE as it may seem, while accompanying Lord Sandhurst around the new Plague Laboratory, Bombay, on the day on which it was opened one could not help recalling the words of one of those old songs of the people that depict in verse, as did Bellamy in prose, an ideal future for the world. There, in a place where plague met one at every turn, where the microbe that has claimed such a large proportion of the population of India was actually being manufactured in countless millions, the thought came back of a good time to come, because one grasped the inner meaning of all the vast quantities of apparatus; because one saw more than the tubes and botties and cylinders and burners: because one recognised that here science was adding one more to her victories, that another step was being taken towards a great, though perhaps still far distant, millennium. It was with feelings more of reverence than curiosity that one passed through those transformed rooms of the Old Government House and examined the process by which one of the greatest blessings of the century—a preventive of the deadly virulence of plague—was being produced.

#### *Cultivation of the Germ.*

The first step in securing toxin is to obtain a medium for the cultivation of the germ to be neutralised. This medium is made by acting upon goat's flesh with acids and subsequently heating it under very high pressure at a temperature of 140° C. As a matter of fact, any flesh would answer the purpose, but that of the goat is deemed best where the native of India is concerned because it appeals to fewest of his many religious prejudices. The heating continues for about six hours, when the little black cylindrical pots in which it takes place, and which are fitted with thermometers and pressure registers, give out a black albuminous solution—practically the same as that which would be found in the human stomach after digesting the same material. This liquid is passed through animal charcoal to decolourise it. Mixed with water in the proportion of 3 to 7 it is then twice heated for the purpose of sterilisation and the nutritive medium is ready.

#### *Process of Insemination.*

In an outhouse is a huge boiler. Into this are run, in a cradle moving on wheels along little rails, numbers of large flasks containing liquid for sterilisation; and the fact that at one time enough fluid is boiled to dose 32,000 people will convey some idea of the extent of the work carried on—a work, it may be added, unequalled in quantity by any laboratory in the world. The medium thus obtained in another room of the institution is sown with bacilli procured from plague patients, this insemination being accomplished by means of a Pasteur *ballon*. From the ball of the vessel two tubes protrude, one (closed at two points by cottonwool) to form a mouthpiece; the other, long and thin, and when not in use closed at the end by fusion. When insemination has to be accomplished the sterilised medium is placed in a large flask retained in a sloping position. A Bunsen burner is applied to the neck, and particularly to that portion of the neck which contains the wadding forming the stopper, in order to prevent any other microbes existing in air being present. At the same time the sealed end of the *ballon* tube is broken and the burner is applied sufficiently long to get rid of any extraneous matter. Next, the purified end is slipped down through the soft stopper of the flask containing the liquid to be treated. The operator, applying his lips to the disengaged tube of the *ballon*, blows. Any germs from his mouth are captured by the cotton wads on the way down, and the pressure which he thus creates in the sphere causes a portion of the plague-infected fluid within to flow down the opposite tube into the flask, which is at once closed and inscribed with particulars as to date and so on. Numbers of these flasks are inseminated together and between the operations the nozzle of the *ballon* is placed in a tube around which steam is continually playing to keep the glass sterile and to save time by avoiding the necessity of hermetically sealing on each occasion. As a very few drops of the infected liquid are necessary for the cultivation the contents of one of these Pasteur arrangements serve for a large number of flasks. Before and after the operation being performed on each set small sample flasks are similarly treated. If these produce a pure culture it may be assumed that the others will do the same.

#### *Haffkine's Germ Test.*

The next room visited is that in which in days gone by the governors of Bombay held their State banquets. Even now the tables groan with the weight upon them, but it is not the weight of viands. There in the darkness stand rows and rows of flasks in which plague is living and thriving amain. A lighted candle held at the opposite side of one of these shows the stalactite growth suspended from the surface, the introduction of a little cocoa-nut oil having aided in the suspension and in keeping the liquid clear. Haffkine discovered this test for the germ after months of close investigation and the discovery is one of the greatest value.

[2] Ibid., p. 535.

[3] Archiv für Experimentelle Pathologie und Pharmakologie, 1901, p. 89.

[1] No. I. was published in THE LANCET of Dec. 14th, 1901, p. 1692.

*A Beautiful Spectacle.*

Plague, as seen in the hospitals, is dreadful, and more dreadful still does it appear as it glazes the eyes of its victims; but, as it grows here in delicate white points, looking whiter against the rich wine colour of the medium, it is beautiful indeed. A shake, and still greater beauty is manifest. The points become disengaged from the surface, roll themselves into thousands of tiny balls, and fall like a miniature snow-storm to the bottom of the flask. For six weeks at intervals the medium is so shaken until at last it is found that no more fresh germs are produced. There is then a solid deposit of living, virulent plague bacilli at the bottom of each vessel. The liquid above is full of their poison and is, in fact, what is known as the toxin.

*Final Sterilisation.*

Away to another room the flasks are taken. There they are placed in a boiler and heated for an hour at 65° C., care being taken to keep the temperature even. When the time is up they are rapidly cooled in troughs specially constructed by Government to the design of the staff. In this way the microbe is killed. To the toxin is now added ½ per cent. of pure carbolic acid, also sterilised. The liquid is now ready to be syphoned into bottles, a process in which, again, are manifest the wonderful care and exactitude necessary in all that pertains to bacteriological science. Again there is sterilising with the Bunsen burner. A long tube, part glass, part rubber, is inserted in the toxin mixture, and the rubber being used for the performance of a sort of milking operation from the flask the contents are drawn off into heated medicine bottles stoppered with sterilised cotton-wool plugs. These plugs are removed, the necks of the bottles are heated, and the bottles are closed with corks, also sterilised in a solution of 4 per cent. formalin and dipped into boiling paraffin so as to create a wall between the cork and the glass. In the stoppering the cork is only touched with heated forceps. Cork and neck are now covered with carbolised parchment which in turn is fastened on with carbolised string. The whole is dipped again into the boiling oil so that all crevices may be closed and a label with particulars regarding brew and dose is affixed.

*A Wonderful Factory.*

In the packing-room below native women are to be seen deftly arranging these bottles in cases ready for export, and neat boxes full of them, with all details stamped on, are sent to nearly every part of the world, of late particularly to South Africa and Australia.

It is a wonderful factory this, an almost unique concern that sells at a loss that humanity may gain. Pity it is that the natives of India cannot be made to understand its value and that the numbers who go to be inoculated are not more in proportion to the number who year after year are stricken down with the plague. Lord Sandhurst could have known Bombay in no more unhappy times than those of his governorship, but it should be to him a bright remembrance that under his government the discovery of plague prophylactic was made, that he forwarded the research, and that among the many institutions with which he was prominently connected in the Presidency of Bombay he can number the great plague laboratory.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Dec. 12th, Mr. H. G. HOWSE, the President, being in the chair.

The PRESIDENT reported the death of Sir William MacCormac, Bart., K.C.B., K.C.V.O., Member of the Council, past-President, and past member of the Court of Examiners of the College.

The following vote of condolence was then carried: "The Council hereby record their deep regret at the death of their colleague, Sir William MacCormac, Bart., K.C.B., K.C.V.O., and their very sincere sympathy with Lady MacCormac in the loss she has sustained. The Council desire to express their grateful sense of the many services rendered to the College by Sir William Mac Cormac and especially to record their appreciative recognition of the dignity and distinction with which he fulfilled the duties of President during his five years of office. For these reasons, as well as for those personal qualities which won for him so many friends, the Council believe that his loss will be long felt and deeply mourned."

The PRESIDENT stated that the vacancy in the Council occasioned by the death of Sir William MacCormac would be filled up at the annual meeting for the election of members of Council in July, 1902.

The PRESIDENT reported the delivery of the Bradshaw Lecture on Dec. 11th by Mr. T. R. Jessop, the subject of the lecture being, "Personal Experiences in the Surgical Treatment of Certain Diseases." The best thanks of the Council were given to Mr. Jessop for his lecture and he was requested to publish it.

The President was nominated as the representative of the College to attend the Jubilee of Owens College, Manchester, on March 12th and 13th, 1902.

The following motions were passed in reference to the resolutions[1] carried at the annual meeting of Fellows and Members:—

1. That the Council having fully considered the resolution moved by Dr. Thomas Morton, seconded by Mr. Joseph Smith, and carried by 30 votes to 2, are of opinion that it would be most undesirable to re-open the question of the representation of Members on the Council.
2. That the mover and seconder of Resolution No. 2 be informed that the resolution has been placed before the Council.
3. That the mover and seconder of Resolution No. 3 be informed that if the British Medical Association should officially forward a copy of their Bill for the amendment of the Medical Acts, if there be one, the Council will be prepared to give it their earnest consideration.
4. That, as it is essential that the representative of the College on the General Medical Council should be a member of the Council of the College, the Council of the College are of opinion that the election should remain in their hands.

## METROPOLITAN HOSPITAL SUNDAY FUND.

UNDER the Presidency of the Lord Mayor the annua general meeting of the constituents of this Fund was held in the Council Chamber of the Guildhall on Dec. 16th.

The report of the Council for the year ending Oct. 31st, 1901, stated that since the publication of the last report the friends and members of the Hospital Sunday Fund, in common with all the inhabitants of the Empire, had had to mourn and regret the death of their late beloved Sovereign, Queen Victoria, who had been patron of the Fund since its establishment, and that the King had accepted the position of patron. The amount collected during the year was £54,731 19s. 3d., being £2738 4s. 9d. in excess of the amount collected in 1900, and, with the exception of 1895, when the Fund exceeded £60,000, the highest amount yet recorded. The total collected by congregations o various denominations amounted to £36,388 6s. 4d. Prebendary Ridgeway of Christ Church, Lancaster-gate, again headed the list of contributors with £1317; Canon Fleming of St. Michael's, Chester-square, collected £1233; and Prebendary Storrs of St. Peter's, Eaton-square, £662. There was an increase this year of £532 in the collections from congregations and 16 more congregations had collected. Mr. George Herring for the third time had sent his munificent donation of £10,000. Sir Frederick L. Cook, Bart., M.P., had sent a special donation of £4000. Sir Savile Crossley, Bart., had again generously contributed £500 (tenth donation); "A. G. P.," £200; and "Delta" had sent his twenty-third donation of £200.

The LORD MAYOR, in opening the proceedings, said that the constituents of the fund had suffered a heavy loss by the death of the great, good, and noble Queen Victoria, who was its patron from the commencement, and they owed a debt of gratitude to His Majesty for having agreed to become patron of their great work. There was every reason to be thankful for the response made to their appeal for contributions this year. The amount received was very near £55,000, an increase over last year, and with the exception of 1895, when special reasons operated to raise the income to £60,000, it was the highest amount yet recorded. They had again to thank Mr. George Herring for a donation of £10,000, and also Sir Frederick Cook, M.P., for £4000, and Sir Savile Crossley for his tenth donation of £500. These large and noble gifts were given because the donors thoroughly appreciated the fact that the work of the Fund deserved the greatest support and sympathy.

The Rev. C. H. GRUNDY moved the adoption of the report, remarking that those who were most associated with the fund were each year more and more impressed with the business-like way, and with the justice, insight, and enthusiasm with which the fund was conducted.

The Rev. Dr. RIGG, in seconding the motion, trusted that under the care and support of the Lord Mayor the fund would next year take another step upon the past.

A speaker, rising in the body of the council chamber, said

[1] THE LANCET, Nov. 23rd, pp. 1460 and 1461.

that as one who moved about a good deal among the churches he was anxious to know whether the committee were perfectly clear with regard to the allocation of the money. In connexion with the Prince of Wales's Fund a good deal of dissatisfaction had been occasioned in consequence of certain of its funds being granted in support of medical schools. A report was going about among the churches that this fund did the same, and, if proved to be true, it would seriously interfere with the gifts of the congregations next Hospital Sunday. He wished to know whether any of the money of this fund had been diverted from the wards of hospitals for the support of medical schools.

Sir SAVILE CROSSLEY (honorary secretary to the Prince of Wales's Hospital Fund) denied that the funds of the Prince of Wales's Hospital Fund had been given in support of medical schools.

The LORD MAYOR said that the question appeared to be whether the committee were justified, before making certain grants to hospitals, in finding out whether the money would be applied to the maintenance of the hospital proper or the medical schools. His answer was that they had nothing whatever to do with the matter. The money was allocated for the grand whole, and he thought that duty was equally done to their own generation and those who came after them whether the money was used for the relief of afflicted mankind in the wards or in bringing the medical schools up to date.

The report was then adopted.

On the motion of Mr. HAY CURRIE, seconded by Sir SAVILE CROSSLEY, the laws of the constitution were passed. Incidentally Mr. Currie referred to the illness of the secretary of the fund which, he said, they all regretted.

On the motion of the Bishop of BARKING, seconded by Sir BORRODAILE SAVORY, the Council for the year 1901 was re-elected for the year 1902, with the Right Rev. the Bishop of Islington, the Honourable Rupert Guinness, C.M.G., Sir Frank Green, Bart., and Mr. J. T. Scriven to fill vacancies.

Archdeacon SINCLAIR proposed that June 15th should be fixed for Hospital Sunday, 1902, and that the cordial coöperation of all ministers of religion within the metropolitan area should be again invited in the usual way.—Dr. ADLER seconded the proposal, remarking that as next year was the coronation year there was every reason to hope that the collection would be a record one. He trusted that the sum collected would reach nearest to the ideal amount of £100,000.

On the motion of Mr. F. H. NORMAN, seconded by Dr. J. G. GLOVER, a hearty vote of thanks was awarded to the Lord Mayor who, in responding, said he yielded to none in his desire to further the great work of the Metropolitan Hospital Sunday Fund.

## NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

A SPECIAL general meeting of Governors and subscribers was held at noon on Dec. 12th, at the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, to consider the Draft Rules for the constitution of the hospital drawn up by the committee appointed by the Governors to make such arrangements as were necessary for dealing with all matters consequential upon, or arising out of the adoption of, the resolution at the special general meeting of the Governors and members of the hospital held on July 6th, 1901, that the report of the Committee of Inquiry be adopted.

The Hon. SYDNEY HOLLAND having taken the chair said: This meeting is called to reject or accept the proposals of the Reconstruction Committee, the committee appointed in consequence of the decision of Sir Edward Fry's Committee of Inquiry. I ask Mr. Green as chairman of the Reconstruction Committee to move the adoption of the report and I ask him for the purposes of convenience to divide that report into two parts. The first part deals with the reconstitution of the hospital and the second with the pension for Mr. Rawlings.

Mr. MELVILL GREEN: I myself would have suggested, if you had not done so, that the report be received in two parts because of the reasons that you have given. All I have to move now is that the report of the committee of which I have had the honour of being chairman, so far as it relates to the repeal of the rules that now exist and the creation of new ones, be adopted, and that the rules of this hospital be repealed and the new rules adopted accordingly. I am sorry not to be able to stop at this point altogether, but I am afraid it has become necessary to say a little more. The rules carry out in substance the report of the Committee of Inquiry. They do a little more and they do a little less. The committee has taken the opportunity of making a few small alterations in the existing rules on some points not touched upon by the Committee of Inquiry, and I do not think I need say anything about them unless anyone wants me to, as it will waste time to go through details about which we are all agreed. In the same manner we have done a little less, as we have pointed out in our report. We have pointed out in our report that we advise that the existing by-laws be abolished *en bloc* and that the Board of Management, all the members of which it will be observed must be elected on the coming into force of the new rules, be left to make such by-laws as they may from time to time find to be necessary. We are not able to advise the governors to go quite so far as the Committee of Inquiry recommended in paragraph 106 of their report, which suggested that new by-laws should not be effective until confirmation by a general meeting. By Rule 39 we have provided that new by-laws shall be immediately effective, but that unless they are confirmed by the following annual general meeting they shall be annulled. We vary in that respect and that, I think, is the only point of variation of real consequence. I believe we were unanimous in thinking that it would work with greater convenience than if we had allowed 12 months to elapse before the Board could make a by-law which they saw was useful. I might add that the committee were all of this opinion, that the rules as laid before you now are not only those that will work, but those that under the circumstances in which we find ourselves are the best that can be provided, and I think they are exceedingly good. We have certainly made sure of the representation of the medical staff on this committee. We have certainly made sure that the office of director, which has been at the bottom of all the friction that has arisen, should be abolished (loud cheers), and I should have been content to have been able to stop at this point. But we have all received a circular from the Board of Management addressed to us under the signature of Mr. Russell whom I am glad to see here and who will be able to explain it if I have misunderstood it. I do not know exactly what members of the board may have been present when this circular was passed, or how far it represents the board, it certainly does not represent them all, because Mr. Pearman and Mr. C. F. Campbell, who are part of the committee for which I am speaking, have assented to the rules being carried *en bloc* that are before you in the report, the adoption of which I am now moving. The committee took the precaution after we had finished to send the rules to every member of the board in order that before we asked that this meeting might be called we might learn whether there was anybody who thought the rules were unworkable or were objected to, and until I received the circular from the board I was under the impression that there would be no doubt as to their being carried unanimously. But we have received the circular and I cannot help referring to it. I am sorry to see it because it prevents me from abstaining from referring to the past. It is not my fault, it is Mr. Russell's and those gentlemen's who authorised him to sign and send this circular out. This circular has produced a most unfavourable impression on my mind towards the capacity of the Board of Management for managing the affairs of the hospital.

The CHAIRMAN: I am sure, Mr. Green, you will excuse me, but I do not see that it will advance matters a bit to throw mud at the other side, because if you make remarks like that it will lead other people to make remarks, and I really do not see how this meeting is ever to come to a decision or how we are to do any business if we begin that sort of thing. We are here to discuss the rules of the hospital and the advisability of their adoption.

Mr. GREEN: We have had this circular sent to us to influence us to-day. You will have to hear from my mouth or from some other person's mouth the reasons why it should or should not influence us.

The CHAIRMAN: I am sorry, but I can only give you my ruling.

Mr. GREEN: This circular discloses this, that the persons on whose behalf it was signed are perfectly satisfied with the management of the hospital as it was before these disturbances two years ago. It discloses that perfectly, and that we have seen all along to be the case. It points out to us—if I may paraphrase the circular—and seems to me to say this: we the Board tried to maintain the old system. We made every effort to do so until we saw we were beaten. We did not agree and we would not agree to a searching inquiry until we saw we were about to be beaten, and then we withdrew our motion in favour of Mr. Green's amendment for a complete inquiry. Since then much light has been thrown on the reason why the Board struggled so hard that there should not be a searching inquiry.

The CHAIRMAN: I must rule this discussion as really out of order. I think it is a very great pity that you do not adopt my suggestions to deal simply and solely with these rules and not to criticise this circular. There is a very great deal of difference between criticising the circular in the sense of answering it and doing what you are now doing which will necessarily lead to answers from the other side. I cannot rule a man out of order if he gets up to answer you, therefore I do ask you from the chair to keep to the argument and nothing else.

Mr. GREEN: I will endeavour to do that. This circular admits that the two great points that I have mentioned have got to be maintained and then the circular goes on to try and water them both down. The medical staff are to be represented on the board. Very well then. Look at the bottom of page 2 of the circular. There are two suggestions made about the medical staff. One suggestion that we make in the Draft Rule 10 is that every member of the staff shall be at liberty to come into this room and to speak and vote at any meeting of governors. It does not seem to me a very remarkable thing. What does the board's circular say? Oh, no, make a man serve seven years on the staff before you allow him to do that. Cut down the influence of the staff all you can. And then what do they say further, that in the quorum for a general meeting the medical staff shall not count. (A Voice: Why?) Why, indeed! Unless it is to do away with a fair and reasonable position for the staff, and unless it is to carry out the idea of keeping the staff in a sort of inferior position—in fact, looking upon the staff, as was done before, as servants of the institution and nothing more. It seemed to me as if this circular had in its mind the idea of keeping the staff down and making their position almost impossible. The circular goes on to say that the proposed Rule 41 "provides for the appointment of a secretary, a senior house physician, and a lady superintendent, who shall have the sole control of their separate departments under the board. The duties and functions of these three officers must necessarily overlap, and in the absence of some authority to whom instant and effective reference and appeal can be made upon matters of daily and hourly occurrence as to which differences of opinion may arise, confusion must ensue with consequent injury to the interests of the patients and of the institution." In all the years that are passed for seven hours of the day Mr. Rawlings has been an the spot to prevent confusion, but no confusion arose during the other 17 hours. Why should we, then, be afraid of confusion during the 24 hours? It is a

fact that the secretary-director was here only seven hours in the day and these things must surely sometimes arise before 10 in the morning and after five in the evening, and yet we had not heard of the confusion. Now the next sentence is this; it is practically all one: "The board feels strongly that there should be some one person responsible to the board for the daily conduct of affairs at the hospital." What is that but bringing back the secretary-director? That is the very thing that is not to be done. The staff are not to be belittled and the director is not to be brought back, but the two things agreed on must be carried out in their entirety.

SIR JAMES CRICHTON BROWNE, in seconding Mr. Green's motion, said: In expressing a hope that peace and harmony will henceforth prevail in the wards of this hospital I think the spirit of the report of the Committee of Inquiry was eminently conciliatory. In that spirit it was certainly accepted by the medical staff and by the governors who supported the staff. There can be no doubt that the report was favourable to the views taken by the staff. On the adoption of the report of the Committee of Inquiry by the Governors there were no ejaculations of triumph on the part of the medical staff and on the part of those governors who supported them. Indeed, the medical staff and the governors who supported them accepted the report with loyalty and unanimously joined in taking the measures necessary to give effect to the recommendations of that report. I think, Sir, they have a right to expect that the Board of Management will loyally accept the report and will loyally accept the drafted rules for the reconstitution of the hospital proposed by a thoroughly competent committee upon which the Board of Management was fully represented. At any rate, I think they have a right to expect that there shall be no attempt by hints or by suggestions or by amendments of these rules to get behind the report of Sir Edward Fry's committee and render some of its recommendations nugatory. I wish to call your attention to one point in this circular from the Board of Management; they say it is a very serious proposal to divide the work of carrying on the daily administration of the hospital between three independent coordinate authorities, those of the secretary, the senior house physician, and the lady superintendent. They say that this arrangement is certain to lead to collision and to difficulties, but they seem to forget that all these three different authorities would have a central authority and would be responsible to the newly-appointed board of management, and they seem to forget that this very same tripartite arrangement has been tried and found to work exceedingly well in many large public hospitals in this country. It seems to me there can be no difficulty whatever in making absolutely distinct and well defined the duties of these different authorities. There would be no necessity for overlapping at all, and we might just as reasonably object to there being different departments in the Government, such as the War Office, the Home Office, the Foreign Office, who all have their centre in the Cabinet, as to object to the three officers having their central authority in the Board of Management. I do not think there can be any difficulty. If there is to be any departure from the proposed rule I hope that Mr. Russell will bear in mind that this is a medical institution in every department of which the medical staff must have paramount influence. If one of these three authorities is to be supreme it should be that of the senior house physician. The policy suggested by these hints thrown out in this circular from the board seems to me to be exactly what Mr. Green has indicated, that is, to pave the way for the introduction of a Rawlings the second into this hospital. Now, if there was one conclusion in Sir Edward Fry's report it was that there should be an end of the autocratic power of the secretary-director. I must say, Sir, I am anxious to avoid any unnecessary friction, as you have most wisely suggested, but I must say that this circular, which I regard with Mr. Green as most unfortunate, does necessitate a little plain speaking. It seems to me an attempt from the way in which it is worded to emphasise and put into prominence everything that was favourable to the Board of Management in Sir Edward Fry's report and to ignore everything else. It echoes the statement in the report no doubt correctly enough that, generally speaking, the hospital was in good order, that the patients were satisfied with their food, treatment, and nursing, and their condition generally. It also emphasises the statement contained in the report that the defects in management to which attention was drawn by the statement of the medical staff were deserving of notice and correction, but they were never sufficient in magnitude and frequency to render the treatment in the hospital otherwise than good as a whole. But, gentlemen, that was not all and I must say that, having read that report of Sir Edward Fry's again, I do regard it as a very serious censure on the Board of Management. I do not think that such a severe censure has ever been made on a hospital committee before, but I must ask you to bear in mind that the report distinctly stated that——

The CHAIRMAN: I do ask you from the chair not to refer to the past. It is not the slightest good. We do not advance one little bit by referring to the bad management of the past or to the bad conduct of anyone. I do ask you on this occasion to fight for peace.

SIR JAMES CRICHTON BROWNE: I assure you I have no desire to fight on the present occasion. I only regret very much that the harmony of the proceedings should have been disturbed by this most unfortunate document. I refer, however, to the main fact in Sir Edward Fry's report and that was the decision arrived at that there had not been proper facilities for intercommunication between the medical staff and the board and their recommendation that two members of that staff should be appointed to the board. That seems to me to be the crucial point. That was the main position on which the Board of Management took their stand, and I am at liberty to say that one of the members of the board distinctly told me that rather than accept a single member of the staff on the board the board as a whole would resign. They have not resigned. They have taken the recommendation very tamely, with a complacency that is more creditable to their fortitude than to their pride. But at this moment Mr. Russell cannot refrain from another hit at the medical staff through the medical profession. For the suggestion is that provision should be made in Rule 31 that of the 10 ordinary members of the board not one under any circumstances, besides those appointed by the staff, shall be members of the medical profession. That is, I think, a suggestion most unfair in restricting the choice of governors and it is a gratuitous insult to the medical profession. We may have in the future some medical man willing to bestow, say, £30,000 on a charity; is it likely that he will be anxious to give the money to an institution in which medical men are excluded from any share in the management? I think not. Let me point out the inconsistency of the suggestion. The board have told us they have had medical men on the staff, they have had Dr. J. S. Ramskill and Dr. Russell Reynolds, and they admit that they rendered conspicuous and admirable service. The board say that these gentlemen were opposed to the views of the medical staff, that they sided generally with the policy of the lay members of the board, and, therefore, gentlemen, I infer that there need be no fear in appointing medical men on the board and there will be no unfair influence exerted by them at the board.

SIR HENRY BURDETT: Rule 41 provides, "There shall be a secretary, a senior house physician, and a lady superintendent who shall have the sole control of their respective departments under the board, and whose duties shall be defined by the board and embodied in the by-laws. It shall be their duty to report to the board and in all cases of difficulty to consult, so far as possible, the chairman, or failing him the vice-chairman, and to act in accordance with his advice." Is it the intention of the committee who made this recommendation that these by-laws shall embody the recommendation of Sir Edward Fry's report on p. 17 to the following effect: "that a resident medical superintendent should be appointed as a permanent official, who should not only discharge the duties of the senior house physician, but should also be the responsible and resident head of the whole institution under the Board of Management"?

The CHAIRMAN: Your question is whether the intention of the committee was that the board should carry out the recommendations of Sir Edward Fry's report.

SIR HENRY BURDETT: They recommend the appointment of a senior resident physician. I want to know if they carry out the recommendation that he shall be the resident medical superintendent.

The CHAIRMAN: It is obvious that that question cannot be answered here; it is a question for the new board to decide. The committee have decided that these three officials are to have coordinate powers and to have sole control of their respective departments, and their duties are to be defined by the board and embodied in the by-laws, and therefore that that question must be left entirely for the by-laws.

SIR HENRY BURDETT: I propose to move an amendment. I think it is a matter involving a very important principle and the whole future of the institution will depend upon the decision of this question, and my amendment is that we should add to this by-law words which will embody the recommendation of Sir Edward Fry's report—namely, recommendation No. 2 on p. 17—that a resident medical superintendent should be appointed as a permanent official. I therefore propose to put in after the words "senior house physician" "who shall act as resident medical superintendent, to be appointed as a permanent official, who shall not only discharge the duties of the senior house physician but shall also be the responsible and resident head of the whole institution under the Board of Management." Those are the words of Sir Edward Fry's committee, and I will beg you to keep your attention on that, and I do so for this reason, because in an institution of this kind where we have patients who from the very nature of their malady are long resident in this institution it is essential that there should be a head. I do it, too, because in this institution we have had a great dispute between the board and the staff which I do not propose to go into, which has centred round the rights of the medical profession, and I believe that there is no doubt that in an institution like this it is most important for everybody that you should have a responsible head and that that head should be a medical man. I hope that we may not have a division on this, but that we may accept the recommendation which has been made by Sir Edward Fry simply as men of business. It is giving the medical staff more than they ask for.

Mr. R. A. BENNET: I will second the amendment.

Dr. CHARLTON BASTIAN: I should like to say something first of all in favour of this Rule 41. I happen to have been for 30 years a physician at a hospital where practically what is intended in this rule has had effect, and during the whole of that time I may say that I have never known of any difficulty whatsoever arising in regard to it. There has been at University College Hospital, the hospital to which I allude, a resident medical officer, and the resident medical officer has had the supreme control of all affairs connected with the medical department, the general medical superintendence of the hospital. There have been a sister superior and a lady superior and a secretary, and there has never been any sort of collision or difficulty that I have heard of with these three officers working in that way. Of course, the committee of the hospital have met once a week and any question that would have to be referred to them could then be always referred to them, and here I take it also that a board would probably meet, or if not a board a committee of that board once a week, and that any question that arose would be decided then, but there is no likelihood at all that there would be any difficulty if you have a man with some experience as senior house physician or resident medical officer, or whatever he may be called. In regard to another point, I think it is a matter of considerable importance whether we have a permanent medical superintendent or whether we have a man whom, I think, it would be better to call the resident medical officer, elected for a short term of years. I think it would be a decided mistake to have a permanent medical officer in this hospital. In hospitals there are always men who have gone through the appointments of house surgeon and house physician, and who have, perhaps, held other appointments at other hospitals, who know perfectly well all the arrangements and all that is necessary to carry on the work of a hospital properly, and those are the men who come up for such an appointment as that of resident medical officer of a hospital. I believe there are several hospitals which are practically managed in that way. A man that has had this experience at hospitals is elected as resident medical officer and comes in for two or three years—I think it is three years at University College—and he is subject to re-election if needful. There is never any difficulty in getting a good and suitable man of that kind for those posts, and the affairs of the hospital can be perfectly well carried out with such arrangements, the resident medical officer being the authority to whom medical questions are brought, the matron and secretary attending to their own work. I believe it is much better that we should not have a permanent medical superintendent but a resident medical officer, who shall be elected for two or three years and be subject to re-election. It is really absolutely necessary that we should have some increase in this hospital. There are at present only two resident medical officers, and this hospital is one in which an enormous amount of work devolves upon such officers, far more than in most hospitals. In the first place

because of the very great complexity of the cases and the long histories. Therefore, I think there would be abundant work for a third man. The resident medical officer would have general superintendence and some part of the work of the house physician.

Mr. GREEN: I should like to point out exactly to the governors why I hope the rule will not be altered. There is no rule to which the committee gave more thought, and we came to the conclusion ultimately that this was the best rule. I think we gave twice as much thought to this rule as to any other. I think Sir Henry Burdett has not quite grasped the recommendations of the Committee of Inquiry of Section 79. He only reads the second alternative and says, Do you mean to have a resident medical superintendent appointed as a permanent official? We have, however, the other alternative, which we have adopted. We are following the other recommendation of the Committee of Inquiry and it was that the hospital should be carried on under the following schemes of government. The secretary should be entrusted with the ordinary duties of a secretary and that in addition he should be a chief executive officer of the Board of Management—do not think that means a director back again—but should be restrained from interfering in any way with the lady superintendent and the members of the medical and resident staffs and with all persons and things placed under their control, and that the house physician, lady superintendent, and secretary should be required in all cases of difficulty to consult, so far as possible, the chairman or vice-chairman of the board and to act in accordance with his advice. That is what has been carried out. We have made this qualification, that we have not put in any word about restraint. Instead of saying that anyone shall be restrained we have said what the duties shall be. We shall not put a man under the fetter of being restrained in such a manner. In one sense things must overlap, and in one sense everything is concerned with the secretary because nearly everything comes down to the drawing of a cheque and the secretary must know what he is drawing a cheque for. You cannot rid him of that knowledge and we have not gone quite so far as that, but we have done what we believe and all of us believe to be the best practical thing and I do hope there may be no alteration whatever to this rule.

Sir FELIX SEMON: May I say as one of the members of the Reconstruction Committee that we are all heartily in accord with the words of Mr. Green? We are perfectly satisfied with the arrangements as recommended by that committee and the medical staff will do everything to avoid friction and give a fair trial to the proposal.

The amendment, proposed by Sir HENRY BURDETT, was put to the meeting and declared lost.

Mr. GEORGE W. E. RUSSELL: I at any rate shall not give any trouble in respect to the direction laid down at the beginning of the meeting by the Chairman about wasting our time. It requires a very pugnacious spirit to retain its pugnacity for two years, and for my own part nothing can be more amicable as regards all personal relations than my present intention. If Mr. Green and Sir James Crichton Browne thought that I was, to use a popular phrase, going to be drawn by their allusions to the circular I am afraid I shall have to disappoint them. It is quite true that it was signed by me—my connexion with the matter consisted in that only. I did not suggest or contribute a line or a word to it. I do not say whether I agree or not with its tenor, but it is not due to me that it is issued to the governors; I merely signed it *pro hac vice et pro re nata*, being placed in the chair at the time, and there my connexion with it ends, and I will not follow any of the suggestions made, nor is it necessary for me to take any further notice. I must not be misunderstood to express any protest against my colleagues who did agree with it. In what I am going to say I think it is a matter of duty to mention that my colleagues have no part or lot in the course which I take as an individual. I am not speaking for the board or behind the board or with any tacit understanding of the board or at the suggestion of the board; the same disclaimer I must make with regard to two officials—namely, Mr. Burford Rawlings and Mr. Bower. My object in rising is to meet the motion moved by Mr. Green and seconded by Sir James Crichton Browne with a direct negative. For my own part I will make my remarks as short as possible. I will simply state that the rules are well as they are. I do not say unimprovably good—that would be ridiculous—but only susceptible to improvement in small details which could be very well dealt with by the board as it already exists or as it will be when altered at any subsequent election. The great fundamental question which underlies the whole trouble was the question whether two members of the medical staff should be admitted to seats on the board. It is within the recollection of those who hear me to-day that throughout I—with no thought of personal reference to anybody, but simply for the sake of the hospital—have been of the opinion deliberately formed that to grant the demand of the medical staff for two seats on the Board of Management would be attended with inconvenient consequences. Sir James Crichton Browne made a direct personal reference to myself in this matter and I hope I shall be allowed to make some answer to him. The sense of it was that the board had altered its attitude with a zeal which did more credit to its fortitude than its pride. I am entirely in agreement with him. It will be in the recollection of many who hear me that at the meeting held early in August, 1900, I was in the chair speaking on behalf of the board in the strongest possible sense hostile to the admission of two members of the medical staff to the Board of Management. At that time I spoke, so far as my belief goes, the unanimous sentiments of the whole board save and except one member. Then came the autumn of that year and the long controversy in the columns of the *Times*, and when the board resumed its deliberations in the fall of the year it became apparent that a very considerable change had passed over the mind of the board. It was not, as far as I know, that anyone thought it desirable to admit these two members to the board, but the board had now come round to think it desirable to submit the matter to inquiry. In August we were under no circumstances ready to submit the matter to any external authority, and, as everyone here knows, it was only during the autumn of that year that a complete change came over the minds of the board in favour of submitting the question to arbitration, and I confess I think that the good-natured sarcasms of Sir James Crichton Browne were justly merited and justly applied, but as a matter of personal explanation I would like to say that whatever change occurred in the mind of my colleagues no change occurred in my own.

A GOVERNOR: You ruled that the discussion should be for the future and not about the past. The present speaker is referring to the past.

The CHAIRMAN: I think that Mr. Russell is giving a personal explanation of his own views to-day in opposing these rules and I think he is quite justified in doing so. Whether it is wise for him as an individual is quite another thing.

Mr. RUSSELL: If the gentleman who has just spoken is at all conversant with public meetings he would know that everybody is entitled by the courtesy of such meeting to make a personal explanation.

The GOVERNOR: Thank you for the information.

Mr. RUSSELL: As far as I am concerned my withers are quite unwrung by Sir James Crichton Browne's criticism. I only wish to make clear to those present that the fact that I have been so constantly in the chair made it impossible for me to express my opinion or try to enforce it upon my colleagues as I should like to have done if I had been merely a member of the board, because the chairman is not entitled, I think, to press his own opinion, and I have been swamped so far by the opinion of my colleagues, who came to the conclusion that the question should be submitted to arbitration. I strongly hold that no case has been made out for revolutionising the rules of the hospital under which it has lived and flourished up till now and to substitute for them a new constitution. I move a direct negative to Mr. Green's proposition.

The CHAIRMAN: It has been moved and seconded that the report of the Committee of Reconstruction be adopted.

The motion was put to the meeting and declared carried.

The CHAIRMAN saying: I declare that that part of the report dealing with the rules is carried, and these rules are adopted (loud applause).

Mr. RUSSELL: I wish to call your attention to the existing rule No. 4, paragraphs 6 and 7, which regulate the demand for a ballot. This cannot be granted unless five governors demand it.

Five governors did not demand a ballot and the business of the meeting was continued.

The meeting then proceeded to the consideration of the second portion of the report of the Committee of Reconstruction dealing with the proposed pension for Mr. Burford Rawlings. The following gentlemen took part in the protracted discussion on this subject: The CHAIRMAN, Mr. GREEN, Mr. J. H. NELSON, Mr. J. WIGAN, Sir JOHN PAGET, Mr. J. PEARMAN, and Sir H. BURDETT. It was ultimately agreed that in addition to a pension of £450 Mr. Burford Rawlings should be presented with the amount of one year's salary, £600.

The usual vote of thanks to the Chairman ended the meeting.

## THE ELECTION OF DIRECT REPRESENTATIVES.

WE have received this message from Dr. W. Bruce addressed to the medical profession of Scotland:—

Dr. Bruce begs to thank the Scottish registered medical practitioners to the number of 975 who by their votes placed him at the top of the poll at the late election. Especially he wishes to express his most grateful thanks to the large number of those who have taken the trouble to personally congratulate him on his victory.

Now that the fight is over he assures the constituency generally of his desire to give his utmost energies towards advancing their interests in so far as it may be in his power to do so during his term of office.

We have also received the following letter from Dr. C. W. Hayward:—

*To the Editors of* THE LANCET.

SIRS,—I trust you will permit me to thank, through the medium of your columns, all those members of the medical profession who were kind enough to record their votes for me at the recent election. Considering the lateness of the hour when I came forward, and the consequently exceedingly limited opportunities I had of placing my views personally before the electorate, I believe that the number is a record for a candidate's first appearance. I therefore hope that on some future occasion they will again do me the favour of voting for me, and that with their votes as a nucleus I may be able to obtain sufficient new supporters to enable me to devote myself to doing the utmost of which I may be capable in the true interests of the general medical profession. I am, Sirs, yours faithfully,

CHARLES W. HAYWARD.

Grove-street, Liverpool, Dec. 15th, 1901.

*To the Editors of* THE LANCET.

SIRS,—The official figures published by the returning officer show that the number of votes recorded for me at the recent election of Direct Representatives was *5569* and not 5369 as stated on page 1693 of THE LANCET of Dec. 14th. I am, Sirs, yours faithfully,

Gibson-square, N., Dec. 18th, 1901. GEORGE BROWN.

WE regret to have omitted the name of Mr. H. Betham Robinson in giving a list of those members of the surgical staff of St. Thomas's Hospital who were present at the funeral of Sir William Mac Cormac.

# VITAL STATISTICS.

## HEALTH OF ENGLISH TOWNS.

In 33 of the largest English towns 5752 births and 4076 deaths were registered during the week ending Dec. 14th. The annual rate of mortality in these towns, which had been 21·3, 20·3, and 19·5 per 1000 in the three preceding weeks, further declined last week to 18·5 per 1000. In London the death-rate was equal to 18·5 per 1000, while it averaged 18·6 in the 32 large provincial towns. Among these large towns the lowest death-rates were 11·0 in Blackburn, 12·8 in Croydon, 13·3 in Derby, and 14·3 in Huddersfield and in Bradford; the highest rates were 21·6 in Sheffield, 22·1 in Preston, 22·6 in Birmingham, 22·7 in Plymouth, and 24·7 in Oldham. The 4076 deaths in these towns last week included 414 which were referred to the principal zymotic diseases, against 473, 434, and 418 in the three preceding weeks; of these 414 deaths 145 resulted from measles, 73 from diphtheria, 55 from whooping-cough, 40 from "fever" (principally enteric), 38 from scarlet fever, 36 from diarrhœal diseases, and 27 from small-pox. No death from any of these diseases occurred last week in Cardiff; in the other towns they caused the lowest death-rates in Croydon, Plymouth, Nottingham, Huddersfield, and Bradford, and the highest rates in Birmingham, Norwich, Birkenhead, Liverpool, and Blackburn. The greatest proportional mortality from measles was recorded in Norwich, Manchester, Oldham, Blackburn, Preston, Halifax, and Sheffield; from scarlet fever in Newcastle; from whooping-cough in Liverpool; and from diarrhœal diseases in Swansea and Burnley. The mortality from "fever" showed no marked excess in any of the large towns. The 73 deaths from diphtheria included 31 in London, six in Liverpool, five in Salford, three in Brighton, three in Portsmouth, three in Bristol, three in Birkenhead, and three in Sheffield. 26 deaths from small-pox were registered last week in London and one in Birmingham, but not one in any of the 33 large towns. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals at the end of the week was 506, against 396, 427, and 474 on the three preceding Saturdays; 134 new cases were admitted during the week, against 141, 123, and 170 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 3336, 3273, and 3241 at the end of the three preceding weeks, had further declined to 3188 on Saturday, Dec. 14th; 332 new cases were admitted during the week, against 379, 320, and 376 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 582, 534, and 470 in the three preceding weeks, further decreased last week to 427, and were equal to the corrected average number. The causes of 52, or 1·3 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Leeds, Sunderland, and in 10 other smaller towns. The largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Manchester, Sheffield, and Gateshead.

## HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·2 and 20·5 per 1000 in the two preceding weeks, rose again to 20·7 during the week ending Dec. 14th, and showed an excess of 2·2 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 15·0 in Paisley and 16·1 in Leith to 21·6 in Glasgow and 24·8 in Dundee. The 660 deaths in these towns included 28 which were referred to measles, 15 to diarrhœa, 11 to "fever," nine to whooping-cough, four to scarlet fever, and three to diphtheria. In all, 70 deaths resulted from these principal zymotic diseases last week, against 85, 77, and 72 in the three preceding weeks. These 70 deaths were equal to an annual rate of 2·2 per 1000, which was 0·3 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of measles, which had been 29, 29, and 23 in the three preceding weeks, rose again last week to 28, of which 19 occurred in Glasgow, six in Dundee, and two in Paisley. The deaths from diarrhœa, which had been 21 in each of the two preceding weeks, declined to 15 last week, and included six in Glasgow, five in Dundee, two in Edinburgh, and two in Perth. The deaths referred to different forms of "fever," which had been eight, nine, and 10 in the three preceding weeks, further rose last week to 11, of which seven were registered in Glasgow, two in Edinburgh, and two in Paisley. The fatal cases of whooping-cough, which had been seven and four in the two preceding weeks, increased again to nine last week, and included seven in Glasgow. The deaths from scarlet fever, which had been three and nine in the two preceding weeks, declined again last week to four, of which three were registered in Edinburgh. The three fatal cases of diphtheria showed a marked decline from recent weekly numbers. The deaths referred to diseases of the respiratory organs in these towns, which had been 186 and 180 in the two preceding weeks, further declined last week to 165, but were 29 in excess of the number in the corresponding period of last year. The causes of 22, or more than 3 per cent., of the deaths in these eight towns last week were not certified.

## HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·8, 18·8, and 20·2 per 1000 in the three preceding weeks, declined again to 17·9 per 1000 during the week ending Dec. 14th. During the past four weeks the death-rate has averaged 20·2 per 1000, the rates during the same period being 20·2 in London and 19·8 in Edinburgh. The 129 deaths belonging to Dublin registered during the week under notice showed a decline of 16 from the number in the preceding week, and included one death from whooping-cough, but not one from any other of the principal zymotic diseases. The zymotic death-rate for the week was thus only 0·1 per 1000, against 1·9 in London and 1·6 in Edinburgh. In no previous week of this year had the number of deaths referred to the seven principal zymotic diseases been less than five. The 129 deaths in Dublin last week included 19 of children under one year of age and 34 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed a decline of four from the respective numbers recorded in the preceding week. One death from violence and three inquest cases were registered, and 38, or nearly a third, of the deaths occurred in public institutions. The causes of seven, or more than 5 per cent., of the deaths in Dublin last week were not certified.

## VITAL STATISTICS OF LONDON DURING NOVEMBER, 1901.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the cities and boroughs in the county of London. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 11·6 per 1000 of the population, provisionally estimated at 4,543,757 persons in the middle of the year. In the three preceding months the rates had been 8·6, 12·4, and 13·8 per 1000 respectively. The rates were considerably below the average in Kensington, Hammersmith, Chelsea, Hampstead, Lambeth, Lewisham, and Woolwich; while they showed the largest excess in St. Pancras, Hackney, Holborn, Southwark, Bermondsey, and Camberwell. During the four weeks ending Nov. 30th, 413 cases of small-pox were notified in London, against 94, 157, and 347 in the three preceding months; 52 cases belonged to Holborn, 44 to Stepney, 43 to St. Pancras, 36 to the City of Westminster, 30 to Bermondsey, 28 to Finsbury, and 28 to Camberwell. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 74, 163, and 284 at the end of the three preceding months, had further risen to 427 at the end of November; the weekly admissions averaged 110, against 23, 44, and 72 in the three preceding months. The prevalence of scarlet fever showed a marked decline from that recorded in the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in Southwark, Bermondsey, Camberwell, Deptford, and Greenwich. The Metropolitan Asylums hospitals contained 3186 scarlet fever patients on Saturday, Nov. 30th, against 2971, 3096, and 3281 at the end of the three preceding months; the weekly admissions averaged 352, against 288, 412, and 399 in the three preceding months. During the month under notice diphtheria was considerably less prevalent than in the preceding month; the greatest proportional prevalence of this disease occurred

## ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING NOVEMBER, 1901.

*(Specially compiled for* THE LANCET.)

| CITIES AND BOROUGHS. | Estimated population in the middle of 1901. | NOTIFIED CASES OF INFECTIOUS DISEASE. | | | | | | | | | | DEATHS FROM PRINCIPAL INFECTIOUS DISEASES. | | | | | | | | | | | Deaths from all causes. | Death-rate per 1000 living. | Deaths of infants under one year to 1000 births. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Small-pox. | Scarlet fever. | Diphtheria.* | Typhus fever. | Enteric fever. | Other continued fevers. | Puerperal fever. | Erysipelas. | Cholera. | Total. | Annual rate per 1000 persons living. | Small-pox. | Measles. | Scarlet fever. | Diphtheria.* | Whooping-cough. | Typhus fever. | Enteric fever. | Other continued fevers. | Diarrhœal diseases. | Total. | Annual rate per 1000 persons living. | | | |
| **LONDON** | **4,543,757** | **413** | **1692** | **1118** | **—** | **307** | **8** | **25** | **478** | **—** | **4041** | **11·6** | **73** | **201** | **38** | **140** | **52** | **—** | **53** | **2** | **64** | **622** | **1·8** | **6984** | **20·0** | **165** |
| *West Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | |
| Paddington | 144,154 | 8 | 50 | 41 | — | 2 | — | 1 | 12 | — | 114 | 10·3 | — | 1 | 2 | 6 | 1 | — | — | — | 2 | 12 | 1·1 | 194 | 17·5 | 140 |
| Kensington | 176,787 | 3 | 44 | 24 | — | 9 | — | — | 19 | — | 99 | 7·3 | — | 22 | 2 | 4 | — | — | 1 | — | 5 | 34 | 2·5 | 271 | 20·0 | 197 |
| Hammersmith | 112,619 | 13 | 17 | 23 | — | 6 | — | 1 | 9 | — | 69 | 8·0 | 2 | 10 | — | 2 | 1 | — | 2 | — | 3 | 20 | 2·3 | 156 | 18·1 | 134 |
| Fulham | 138,426 | — | 48 | 68 | — | 8 | — | 1 | 14 | — | 139 | 13·1 | — | 4 | — | 4 | — | — | 2 | 1 | 4 | 15 | 1·4 | 201 | 18·9 | 165 |
| Chelsea | 73,879 | — | 13 | 6 | — | 4 | — | 1 | 6 | — | 30 | 5·3 | — | — | — | — | — | — | 1 | — | 1 | 2 | 0·4 | 86 | 15·2 | 175 |
| City of Westminster | 182,502 | 36 | 41 | 21 | — | 15 | — | — | 16 | — | 129 | 9·2 | 9 | 5 | — | 2 | — | — | 1 | — | 1 | 18 | 1·3 | 268 | 19·1 | 141 |
| *North Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Marylebone | 133,060 | 10 | 37 | 18 | — | 8 | — | — | 12 | — | 85 | 8·3 | — | — | 3 | 3 | — | — | — | — | 1 | 7 | 0·7 | 162 | 15·9 | 75 |
| Hampstead | 82,287 | 1 | 6 | 8 | — | 4 | — | — | 5 | — | 24 | 3·8 | 1 | — | — | 1 | — | — | - | — | 1 | 3 | 0·5 | 68 | 10·8 | 110 |
| St. Pancras | 236,297 | 43 | 98 | 84 | — | 20 | 2 | 2 | 31 | — | 280 | 15·5 | 8 | 8 | 1 | 11 | — | — | 3 | - | 1 | 32 | 1·8 | 371 | 20·6 | 122 |
| Islington | 336,325 | 13 | 151 | 90 | — | 30 | 2 | 2 | 26 | — | 314 | 12·2 | 2 | 38 | 3 | 18 | 1 | — | 6 | — | 1 | 69 | 2·7 | 505 | 19·6 | 147 |
| Stoke Newington | 51,328 | 2 | 21 | 14 | — | 4 | — | 1 | 6 | — | 48 | 12·2 | — | — | - | 1 | 1 | — | 1 | — | — | 3 | 0·8 | 53 | 13·5 | 126 |
| Hackney | 219,780 | 4 | 98 | 114 | — | 12 | 1 | 3 | 31 | — | 263 | 15·6 | 1 | — | 3 | 7 | 1 | — | 2 | — | 2 | 16 | 0·9 | 295 | 17·5 | 127 |
| *Central Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | |
| Holborn | 59,205 | 52 | 19 | 11 | — | 3 | — | — | 12 | — | 97 | 21·4 | 14 | — | — | 3 | — | — | — | — | 1 | 18 | 4·0 | 125 | 27·5 | 169 |
| Finsbury | 101,253 | 28 | 39 | 19 | — | 10 | 1 | — | 10 | — | 107 | 13·8 | 4 | 9 | 3 | 2 | 6 | — | 1 | — | 3 | 28 | 3·6 | 203 | 26·1 | 174 |
| City of London | 26,627 | 1 | 11 | 6 | — | 2 | — | 1 | 1 | — | 22 | 10·8 | — | — | — | — | — | — | 1 | — | 1 | 2 | 1·0 | 43 | 21·0 | 121 |
| *East Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shoreditch | 118,564 | 2 | 36 | 34 | — | 9 | 1 | — | 18 | — | 100 | 11·0 | 1 | 5 | 1 | 7 | 3 | — | — | — | 2 | 19 | 2·1 | 232 | 25·5 | 226 |
| Bethnal Green | 129,700 | 7 | 52 | 37 | — | 13 | — | — | 16 | — | 125 | 12·6 | - | 8 | 1 | 6 | 1 | — | 2 | — | — | 18 | 1·8 | 242 | 24·3 | 245 |
| Stepney | 298,864 | 44 | 118 | 67 | — | 28 | — | 4 | 42 | — | 303 | 13·2 | 7 | 4 | — | 8 | 6 | — | 2 | — | 4 | 31 | 1·4 | 575 | 25·1 | 223 |
| Poplar | 168,887 | 19 | 50 | 53 | — | 19 | — | — | 18 | — | 159 | 12·3 | 4 | 5 | — | 11 | 3 | — | 2 | — | 4 | 29 | 2·2 | 306 | 23·6 | 184 |
| *South Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | |
| Southwark | 206,219 | 25 | 100 | 51 | — | 14 | — | 2 | 40 | — | 232 | 14·7 | 6 | 8 | 2 | 6 | 4 | — | 1 | — | 7 | 34 | 2·1 | 403 | 25·5 | 235 |
| Bermondsey | 130,348 | 30 | 64 | 22 | — | 11 | — | 1 | 17 | — | 145 | 14·5 | 4 | — | 4 | 5 | 3 | — | 5 | — | 2 | 23 | 2·3 | 266 | 26·6 | 209 |
| Lambeth | 302,460 | 15 | 88 | 41 | — | 18 | — | 1 | 20 | — | 183 | 7·9 | 2 | 26 | 6 | 2 | 4 | — | 2 | — | 4 | 46 | 2·0 | 474 | 20·4 | 140 |
| Battersea | 169,364 | 7 | 52 | 29 | — | 11 | — | 1 | 15 | — | 115 | 8·9 | 1 | 32 | 1 | 1 | 5 | — | 5 | — | 2 | 47 | 3·6 | 270 | 20·8 | 168 |
| Wandsworth | 233,943 | 8 | 101 | 68 | — | 5 | — | 1 | 27 | — | 210 | 11·7 | 1 | 8 | - | 9 | 4 | — | 1 | 1 | 4 | 28 | 1·6 | 289 | 16·1 | 159 |
| Camberwell | 259,897 | 28 | 175 | 71 | — | 15 | — | 1 | 19 | — | 309 | 15·5 | 6 | 1 | 5 | 11 | 2 | — | 4 | - | 2 | 31 | 1·6 | 383 | 19·2 | 144 |
| Deptford | 110,732 | 2 | 53 | 35 | — | 12 | — | — | 12 | — | 114 | 13·4 | — | — | — | 2 | 2 | — | 3 | — | 4 | 11 | 1·3 | 142 | 16·7 | 157 |
| Greenwich | 96,188 | 3 | 56 | 14 | — | 5 | — | 1 | 12 | — | 91 | 12·3 | — | — | — | 1 | — | — | 1 | — | — | 2 | 0·3 | 126 | 17·1 | 171 |
| Lewisham | 128,423 | — | 32 | 32 | — | 7 | 1 | — | 8 | — | 80 | 8·1 | — | 2 | | 5 | 3 | — | 1 | — | 2 | 14 | 1·4 | 141 | 14·3 | 97 |
| Woolwich | 117,619 | 9 | 22 | 17 | — | 2 | — | — | 4 | — | 54 | 6·0 | — | 5 | — | 2 | 1 | — | 2 | — | — | 10 | 1·1 | 134 | 14·9 | 112 |
| Port of London | — | — | — | — | — | 1 | — | — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

* Including membranous croup.

in Fulham, St. Pancras, Hackney, Poplar, Wandsworth, and Deptford. There were 1504 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 1336, 1499, and 1570 at the end of the three preceding months; the weekly admissions averaged 200, against 177, 248, and 243 in the three preceding months. The prevalence of enteric fever showed a marked decline from that in recent months; among the various metropolitan boroughs the greatest proportional prevalence of this disease occurred in St. Pancras, Islington, Finsbury, Bethnal Green, Stepney, Poplar, Bermondsey, and Deptford. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 225, 292, and 291 at the end of the three preceding months, had further declined to 245 at the end of November; the weekly admissions averaged 32, against 42, 50, and 38 in the three preceding months. Erysipelas was proportionally most prevalent in St. Pancras, Hackney, Holborn, Shoreditch, Stepney, and Southwark. The 25 cases of puerperal fever notified during the month included four in Stepney, three in Hackney, two in St. Pancras, two in Islington, and two in Southwark.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in the public institutions of London having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending Nov. 30th the deaths of 6984 persons belonging to London were registered, equal to an annual rate of 20·0 per 1000, against 15·4 per 1000 in each of the two preceding months. The lowest death-rates in the various metropolitan boroughs were 10·8 in Hampstead, 13·5 in Stoke Newington, 14·3 in Lewisham, 14·9 in Woolwich, 15·2 in Chelsea, and 15·9 in St. Marylebone; the highest rates were 25·1 in Stepney, 25·5 in Shoreditch and in Southwark, 26·1 in Finsbury, 26·6 in Bermondsey, and 27·5 in Holborn. The 6984 deaths from all causes during the month included 622 which were referred to the principal zymotic diseases; of these 73 resulted from small-pox, 201 from measles, 38 from scarlet fever, 140 from diphtheria, 52 from whooping-cough, 52 from enteric fever, two from simple continued fever, and 64 from diarrhœal diseases. The lowest death-rates last month from these diseases were recorded in Chelsea, St. Marylebone, Hampstead, Stoke Newington, Hackney, and Greenwich, and the highest rates in Kensington, Islington, Holborn, Finsbury, Bermondsey, and Battersea. The 73 fatal cases of small-pox greatly exceeded the average, and included fourteen in Holborn, nine in the city of Westminster, eight in St. Pancras, seven in Stepney, six in Southwark, and six in Camberwell. The 201 deaths from measles showed a slight increase upon the average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Kensington, Hammersmith, Islington, Finsbury, Lambeth, and Battersea. The 38 fatal cases of scarlet fever were less than one-half of the corrected average number; the greatest proportional fatality from this disease occurred in St. Marylebone, Finsbury, Bermondsey, Lambeth, and Camberwell. The 140 deaths from diphtheria were 62 below the average number in the corresponding periods of the 10 preceding years; this disease showed the highest proportional fatality in Paddington, St. Pancras, Islington, Holborn, Shoreditch, Bethnal Green, Poplar, and Camberwell. The 52 fatal cases of whooping-cough showed a marked decline from the corrected average number; among the various metropolitan boroughs whooping-cough was proportionally most fatal in Finsbury, Shoreditch, Bermondsey, Battersea, and Lewisham. The deaths referred to "fever" last week numbered 54, against an average of 90 in the corresponding period of the 10 preceding years; the "fever" death-rate was highest in Fulham, Islington, Bethnal Green, Bermondsey, Battersea, and Deptford. The 64 fatal cases of diarrhœa were just equal to the corrected average number; among the various metropolitan boroughs the greatest proportional fatality from this disease was recorded in Kensington, Hammersmith, Fulham, Finsbury, Southwark, and Deptford. In conclusion, it may be stated that the aggregate mortality in London from these diseases during November was nearly 13 per cent. below the average.

Infant mortality in London last month, measured by the proportion of deaths among children under one year of age to registered births, was equal to 165 per 1000. The lowest rates of infant mortality were recorded in St. Marylebone, Hampstead, St. Pancras, City of London, Lewisham, and Woolwich; and the highest rates in Kensington, Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, and Bermondsey.

# THE SERVICES.

## ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons:—T. E. H. Williams to the *President* for R.N. Rendezvous and at medical department, and H. A. W. Richardson to the *Defiance*. Staff Surgeon E. J. Morley to the *Magnificent*.

## ARMY MEDICAL SERVICE.

Surgeon-General W. Taylor, C.B., Honorary Physician to the King, to be Director-General, vice Surgeon-General A. F. Preston, Honorary Physician to the King, whose tenure of the temporary appointment has expired. Dated Dec. 2nd, 1901.

Lieutenant-Colonel A. Keogh, C.B., R.A.M.C., has been selected for the appointment of Deputy Director-General, with the temporary rank of Surgeon-General, from Jan. 1st, 1902, on the retirement of Surgeon-General H. S. Muir, C.B.

## ROYAL ARMY MEDICAL CORPS.

Major W. Lewis Gray has arrived in the Southern District for duty and has taken over charge of the station hospital, Parkhurst. Lieutenant-Colonel D. Bruce proceeds from London to Aldershot for duty.

## INDIA AND THE INDIAN MEDICAL SERVICES.

The King has approved of the following promotions among the officers of the Indian Medical Service:—Majors to be Lieutenant-Colonels (dated Oct. 1st, 1901: *Bengal Establishment:* James Barry Gibbons, Donald St. John Dundas Grant, and Dirom Grey Crawford. *Madras Establishment:* Robert Bradley Roe, John Smyth, Hugh Greany, and Edward Pettingall Youngerman. Captains to be Majors (dated Sept. 30th, 1901): *Bengal Establishment:* Henry Bruce Melville, Joseph Charles Stoelke Vaughan, Alexander Leonard Duke, Joshua Chaytor White, Harry William Elphick, and Charles Henry Bedford. *Madras Establishment:* Charles Louis Williams and Wilfrid Constant Vickers. *Bombay Establishment:* John Blackburn Smith and Henry Francis Cleveland.

The King has also approved of the retirement from the service of the undermentioned officers:—*Bengal Establishment:* Lieutenant-Colonel John Manook Zorab (dated Oct. 9th, 1901); Lieutenant-Colonel Frederic Daly Cæsar Hawkins (dated Oct. 26th, 1901) [this notification supersedes that of the transfer to the half-pay list of Lieutenant-Colonel Hawkins made in the *London Gazette* of Nov. 26th, 1901]; Lieutenant-Colonel Patrick Mullane (dated Nov. 1st, 1901).

## VOLUNTEER CORPS.

*Artillery:* 1st Gloucestershire: Surgeon-Lieutenant W. J. Hill to be Surgeon-Captain. *Royal Engineers* (Volunteers): 1st Lancashire: George Arthur Hawkins-Ambler is re-appointed Surgeon-Captain. *Rifle:* 1st Volunteer Battalion the Suffolk Regiment: Surgeon-Lieutenant F. Ward to be Surgeon-Captain. 1st Roxburgh and Selkirk (the Border): Brigade-Surgeon-Lieutenant-Colonel G. H. Turnbull is seconded whilst holding the appointment of Senior Medical Officer to the Scottish Border Volunteer Infantry Brigade. 3rd Lanarkshire: Surgeon-Lieutenant A. S. Tindal to be Surgeon-Captain. 3rd (Sunderland) Volunteer Battalion the Durham Light Infantry: Surgeon-Captain J. C. Fenwick resigns his commission.

## ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant-Colonel H. M. Morgan having retired from the Volunteer Forces ceases to belong to the Army Medical Reserve of Officers.

## SOUTH AFRICAN WAR NOTES.

The following have been discharged from hospital to duty:—Major O. R. A. Julian, R.A.M.C., Lieutenant J. M. Buist, R.A.M.C., and Civil Surgeons Macauley, Clarke, Newland, Clements, and Walker.

## SOME GERMAN SUGGESTIONS ABOUT ARMY MEDICAL REFORM.

Our contemporary the *Outlook* last week had a long article based upon a communication which it had received from a high German authority *apropos* of the Government proposals for the re-organisation of the Army Medical Service

in this country. It appears that the new War Office scheme has attracted attention in Germany and abroad among those who have been studying the whole question of army reform. A good many points are taken up and discussed in the communication in question—which requires (and well deserves) to be read as a whole to be rightly appreciated and understood—and among others the institution of an Advisory Board is regarded as a necessity. The fact that the German Government has within the last six months established a "scientific senate" acting as an Advisory Board to the Director-General (*Generalstabsamt der Armee*) is adduced in support of that view. This senate is a large one, and in addition to its ordinary members it includes a number of eminent specialists in every branch of medical science. The board controls the course of study, the plans of post-graduate courses, questions of sanitation and hygiene, research on diseases of the army and their treatment, &c. The German correspondent of the *Outlook* would have a much larger board than that proposed in Mr. Brodrick's new scheme, and he thinks that in order to make an efficient and representative organisation appointments to the posts of consulting physicians and surgeons to the army should be made in time of peace by the Crown acting on the advice of the Secretary of State for War. In this way it is contended that the most eminent practitioners of the day would be made available and would regard their selection for such appointments as an honour and distinction. He considers that the number and range of the examinations set forth in the War Office scheme, if carried out, would tend to repel instead of to attract medical candidates and proposes a system of scholarships similar to those in vogue in the German service and makes several other suggestions. The German scheme as outlined in the *Outlook* is a big affair and would, we fear, be difficult to carry out in this country. In summing up the various points of his communication the German authority adds: 1. Induce young men to join the Royal Army Medical Corps by giving them scholarships. 2. During their candidature test their medical and social qualifications. 3. By frequent scientific courses and liberal grants of "study leave" stimulate the officers to replenish and increase their knowledge. 4. Promotion to take place by seniority, but subject to confidential reports from various sources (military and civil) up to the rank of lieutenant-colonel. 5. All higher posts to be granted, without regard to seniority, on grounds of general merit or distinction in the service, by the Director-General.

### AFFAIRS IN SOUTH AFRICA.

As far as the purely military news is concerned it may be very briefly summed up as mainly consisting in the extension of the blockhouse system, General Bruce Hamilton's recent attacks upon, and capture of, Boer laagers, and the capture of Commandant Kritzinger. A good deal of sickness still continues in South Africa, but not more than might be expected to make its appearance under the circumstances. The names of those returned as dangerously ill amount to about 100, enteric fever occupying, as usual, the chief position. The casualties from wounds have to be added, of course, to the returns of sickness. The death-rate from all causes happily does not appear to be a heavy one. The *Times* of Dec. 16th contains an interesting and instructive article reviewing the recently published blue-book of 131 pages relating to the working of the refugee camps in the Transvaal, Orange River Colony, Cape Colony, and Natal. The report of Dr. Pratt Yule on the general medical condition of the camps in the Orange River Colony is well worth reading. The subject of camp diseases in relation to camp sanitation is taken up and commented upon and much is said about such diseases as measles, whooping-cough and pneumonia which have been so widely prevalent in the concentration camps. After stating, among other things, that it is well known to military officers that camping grounds quickly become foul under the best circumstances, he goes on to call attention to the important point that the urine of patients convalescent from typhoid fever often contains a pure culture of the typhoid germ, which, by the methods of disposal pursued in refugee camps, becomes blown about in the dust, and he states his belief that the typhoid infection of camps is principally air-borne. Dr. Pratt Yule is also of opinion that the extraordinary frequency of pneumonia and lung disease generally in these camps is commonly attributable to some air-borne infection, due in part to the increasing pollution of camping-grounds.

### THE REFORM OF THE ARMY MEDICAL SERVICES.

Among the number and variety of unfavourable criticisms which the report of Mr. Brodrick's War Office Committee has called forth we notice that it is generally, but somewhat hastily we think, assumed that the medical officers now serving under existing regulations will be deprived (without any compensatory advantage) of the privilege of retiring on £1 a day after 20 years' service. We cannot believe that this is intended to be the case. According to our reading there is nothing definite in the report to indicate that such a proposal would be made applicable to medical officers now serving, but only to those who may hereafter enter under a new warrant—that is, supposing the proposal to be embodied in a forthcoming warrant which, if the authorities are wise, they are not likely to do.

### FIELD HOSPITAL EQUIPMENT IN INDIA.

The following recommendations of the committee on the question of field hospital equipment in India will be given effect to from April 1st next:—(1) Changes in scale of commissariat and ordnance stores: (2) recommendations regarding field hospital boxes, flags, and tents; and (3) supply of perchloride of mercury. Congo stoves are to be given a further trial, a small portable stove to burn solidified spirits of wine and a lamp lantern for burning acetylene gas being provided. The question of a more liberal provision of the Roentgen ray apparatus is under consideration.

### THE REFUGEE CAMPS.

A supplementary blue-book to the one already issued was published on Dec. 14th, dealing with the working of the refugee camps in the Transvaal, Orange River Colony, Cape Colony, and Natal. The reports contained in the book will reassure everyone that Mr. Chamberlain and the authorities concerned are making every effort to promote hygienic conditions in the camps which have been established by military needs.

### THE MEMORIAL SERVICE AT ST. PAUL'S CATHEDRAL.

Among those who were present at the memorial service at St. Paul's Cathedral on Dec. 16th to commemorate those who have fallen in South Africa were Colonel Sir Thomas Gallwey, C.B., R.A.M.C. (representing the Director-General of the Army Medical Department) and Lieutenant-Colonel W. Babtie, V.C., R.A.M.C.

At an investiture, held at St. James's Palace on Dec. 17th, decorations and rewards granted in recent Gazettes were conferred by His Majesty the King.

# Correspondence.

"Audi alteram partem."

## THE EDUCATION OF THE MEDICAL STUDENT AND THE GENERAL MEDICAL COUNCIL.

*To the Editors of* THE LANCET.

SIRS,—As I was unfortunately not able to be present at the late meeting of the General Medical Council perhaps you will allow me the opportunity of stating in THE LANCET that, had I been present at the discussion on the report of the Education Committee as regards the proposals submitted respectively by Dr. Bruce and Mr. Ball, I should have voted with the minority. I do not mean now to remark on the very complicated entanglements that have led up to these proposals and which seem to me to involve the risk of a very heavy fall for the General Medical Council if there should be an appeal to the Privy Council. I hope that the committee which has been appointed *ad hoc* will have this issue in mind, as it was very distinctly and significantly set forth in the Council by Dr. MacAlister. I regard it as unfortunate that the Council did not accept the recommendation of the Education Committee so far as the principle, at least, of the proposals is concerned, viz.:—

> That the Council approves of the suggestion that the registration of a medical student should be postponed until he has passed a recognised examination in the preliminary scientific subjects, on the understanding that the subsequent course of professional study should occupy at least four academic years.

It seems to me that the acceptance of a proposition of this kind by the General Medical Council would not only have been a reconciling one as regards its own previous decisions (which are much more in need of reconciliation than some of us are willing to allow), but would have provided a *modus vivendi* as regards the present unfortunate deadlock with the English

Royal Colleges. In the event of an appeal to the Privy Council (which I need not say I greatly deprecate) it would certainly not be overlooked that the General Medical Council itself, notwithstanding its own Education Committee, had thrown away an opportunity of this kind by its vote upon their report. But these grounds, though sufficient in my opinion, would not have been the only grounds of my voting with the minority in this case. No notice was taken in the discussion of what has become apparent enough to some of us in Scotland—viz., that the main object of the institution of the fifth year of study by the General Medical Council is being gradually and insidiously invaded, in quite a different direction from that attributed, rightly or wrongly, to the English Royal Colleges. No one who attentively considers the matter can doubt, I think, that the main purpose of the addition of a fifth year to the compulsory period of a medical education was to provide an entirely separate clinical year, *to be attended after the curriculum of lectures and other academic studies had been completed*, on which account the regulations were deliberately so framed as to leave candidates perfectly uncontrolled as to the schools and hospitals at which these practical and all-important studies were to be conducted. This, however, is evidently not the view of the fifth year which was present to the mind of one member of the General Medical Council who (according to the report) "thought that it was in order to make room for chemistry, physics, and biology that the five years' curriculum had been instituted." It is true that a subsequent speaker rightly expressed a measure of "surprise" at this very significant and uncompromising idea, but all the same it shows very well the trend of actual experience. The early subjects, being in a position of vantage in virtue of their coming first in the curriculum, have gradually expanded their requirements so as virtually to take complete possession of the extra year; and "medicine, surgery, and midwifery"—the thoroughness of instruction in which is, observe, the very *raison d'être* of the General Medical Council—are shunted along, so that when the fifth year comes it is found to be crowded up with the remains of studies that ought, according to the original intention of the fifth or final year, to have been completed before it began. Now, while the attention of the General Medical Council has been engrossed, to what I think is a quite undue extent, with an apparent encroachment on the first year of the medical curriculum, this virtual evasion of the purpose of the final year has, so far as I have observed, received no attention at all. And yet a perfectly undisturbed year for practical and clinical work, outside what may be called the merely academic requirements of the medical curriculum, is surely a question of no less importance (to put it mildly) than whether physics, chemistry, and elementary biology are, or are not, to be studied in a medical school on the one hand, or as part of a general education on the other. As matters stand at present, unless we are to look forward shortly to a sixth year being added for the final practical subjects (and even, perhaps, in that case) it will be necessary for the General Medical Council to secure the proper application of the final year as an undisturbed period of clinical and practical studies by a ruling, not only that the elementary scientific subjects shall have one compulsory year and no more, but also that before entering on the "clinical year" evidence shall be put in that the whole curriculum of "lecture" subjects has been completed, so as to leave (according to the original intention) an undisturbed time and practical freedom of choice as regards the clinical subjects. The suggestions of Dr. Bruce and Mr. Ball, had they been more kindly received by the Council, would, I think, have led the way to a readjustment of the curriculum generally, in which something effective might have been introduced in the direction here indicated. I am not to be considered as disparaging the early scientific subjects in thus attempting to keep them in what seems to me their proper place; indeed, few men engaged in medical teaching have been more consistent throughout a long career in supporting these subjects and insisting on their value as a discipline. Much more might be written on this topic, but to save your space I will abstain from further remarks at present.

I am, Sirs, yours faithfully,

Edinburgh, Dec. 14th, 1901. W. T. GAIRDNER.

## A QUESTIONABLE PUNISHMENT.

*To the Editors of* THE LANCET.

SIRS,—Four or five years ago an able and popular civil surgeon of the Indian Medical Service prescribed, by the merest slip of the pen, an overdose of strychnia. The native compounder made up the prescription as it stood and the patient died in consequence. The compounder was, I believe, dismissed, and the civil surgeon not only lost his appointment, but has remained ever since under such a cloud with the Indian Government that his career seems to be ruined. It seems to me, if the facts are as I believe them to be, that the person to blame in this case was chiefly, if not entirely, the compounder. The civil surgeon was a most capable physician, and had taken one of the first places in the entrance examinations of the service. The mistake, therefore, was certainly not due to any ignorance on his part, but was the result of a pure accident in writing—an accident which may, and often does, happen even to the most careful prescribers. On the other hand, to make up a poisonous prescription—to measure out and to mix in a poisonous dose of a deadly drug like strychnia—is a deliberate action which can only be ascribed to the grossest ignorance on the part of the compounder, and, unless I am mistaken, the law in this country makes the compounder chiefly, if not solely, responsible in such cases.

It was, no doubt, right to take notice of the most unfortunate error made by the civil surgeon; it may have been even right to deprive him for the time of his responsible post. But is it quite right to ruin his career entirely merely for a momentary slip of the pen which, after all, would have had no evil consequence if the authorities who gave the punishment were more careful regarding the qualifications of the men whom they employ as compounders? I should like to take the opinion of your readers on this point with a view to further action if deemed necessary.

I am, Sirs, yours faithfully,

Liverpool, Dec. 14th, 1901. RONALD ROSS, F.R.C.S., F.R.S.

## THE METHODS OF EXAMINING FOR MOVEABLE KIDNEY.

*To the Editors of* THE LANCET.

SIRS,—Reading the valuable address on the subject of Moveable Kidney by Mr. Henry Morris in THE LANCET of Nov. 30th (p. 1467), I was much interested in his description of the *palpation néphroleptique* of Glénard. Without knowing that Glénard had originated this manœuvre, or that he had glorified it with such a lengthy name, I have been practising a similar proceeding for some years on the loins of every patient whose abdomen I have had to examine, and I should like to bear tribute to the excellence of the method. By it the degree of mobility of the kidney can be estimated by the use of one hand alone, or by the use of both hands both kidneys can be simultaneously palpated. To examine the *right* kidney the fingers of the *left* hand are placed behind the right loin so that the first and second fingers are over the last rib, while the thumb compresses the loin from the front immediately below the costal margin. The patient being told to breathe quietly the loin is gently but firmly compressed between the fingers behind and the thumb in front, when the loin will be felt in the normal condition to be empty; the fingers and thumb in a thin subject are able to be brought within two inches of one another. The patient is now told to inspire deeply but quietly, and the compression of the loin being maintained the end of the kidney will be felt to butt against the barrier formed by the first finger behind and the thumb in front; indeed, if the inspiration be a powerful one the kidney, when unduly moveable, may forcibly separate them as it descends. When the lower end of the kidney touches the hand the thumb is gently relaxed, and as it is lifted (still maintaining some pressure) the kidney will be felt either wholly or in part to pass between the fingers and thumb. Unless the compression by the thumb be relaxed the kidney is unable to descend, but, on the other hand, a degree of pressure must be kept up, otherwise the abdominal wall by bulging forwards as inspiration proceeds will carry the thumb off the anterior surface of the kidney. Just at the height of inspiration, but before expiration has begun, the thumb, with a somewhat rolling motion upwards, sharply depresses the anterior parietes against the fingers behind, with the result that the kidney is caught between them. If the lower end is compressed the organ will be driven upwards under shelter of the ribs by a mechanism similar to that which children use when they express a cherry stone from between their finger and thumb. If, however, the mobility is such that the upper end of the organ is caught instead of the lower the same mechanism will force it downwards, and by keeping

the loin compressed it can be retained below the thumb for as long a time as the examiner pleases.

The right hand, previously passive, is now used to palpate the kidney in its abnormal position. When the examination is finished the right hand gently pushes the kidney upwards whilst the thumb of the left hand is raised to allow of its passage. As the organ returns the thumb can be seen to ride over it and the peculiar slipping sensation associated with its replacement is very noticeable. The use of the second hand, however, is not necessary if mobility alone is in question, and by using a hand for each loin both kidneys, if sufficiently moveable, can be fixed below the thumbs. Sometimes the sharp compressing movement nips the kidney exactly at its centre and it may then be held in this position, though this usually causes some pain.

The application of the method is rendered easier by the fortunate possession of long fingers, and particularly of a long thumb, but it undoubtedly has the advantage of enabling the kidney to be felt throughout late inspiration and early expiration; for although, as Mr. Morris points out, a deep inspiration produces a hardening and bulging forwards of the anterior abdominal wall, yet firm compression is able in most cases to resist this so long as the patient breathes quietly and not spasmodically. By using this method it will be found that (in women at least) the lower end of the right kidney can practically always, and that of the left kidney nearly always, be easily felt on deep quiet inspiration. My experience is limited to the examination of women, but in them I should certainly hesitate to call any kidney moveable above the upper end of which I found it impossible to get my thumb by using this manœuvre.

I am, Sirs, yours faithfully,

W. F. VICTOR BONNEY, M.D., M.S. Lond.,
Assistant Physician, Chelsea Hospital for Women.

Devonshire-street, W., Dec. 14th, 1901.

## CANCER AMONG HINDOOS.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of Oct. 5th, p. 939, Mr. C. B. Keetley, writing upon the subject of cancer, states that he had been informed by Dr. C. N. Saldanha that "Hindoos suffer comparatively little from cancer." Upon this statement of the comparative immunity of Hindoos from cancer both Dr. Saldanha and Mr. Keetley base certain arguments regarding the prophylaxis of the disease. I do not know in what part of India Dr. Saldanha gathered the experience upon which he bases his opinion, but his statement is certainly not correct so far as Southern India is concerned. On the contrary, in this part of India cancer is very prevalent amongst Hindoos and much more so than amongst Mahomedans. In the wards of the Madras General Hospital cases of cancer affecting Hindoos are almost always to be found. At the time that I write I have three Hindoos in my wards suffering from this disease. Indeed, so common is the affection here that there are few diseases that our students are so familiar with when they leave college as cancer. The disease is most frequently seen in the mouth, affecting the inner side of the cheek. Cancer of the penis is also very common, as well as cancer of the uterus and breast.

I am, Sirs, yours faithfully,

J. MAITLAND, M.D. Edin.,
Lieutenant-Colonel, I.M.S.

Madras, Nov. 28th, 1901.

## ADMINISTRATION OF CHLOROFORM.

*To the Editors of* THE LANCET.

SIRS,—One cannot, I think, deprecate too strongly the overweening assumption of perfect security from danger for any one method of administering an anæsthetic. I refer to the letter of Mr. C. J. Harris in THE LANCET of Dec. 14th, p. 1696. Neither, in my opinion, can one too strongly urge on enthusiasts such as Mr. Harris that, at present at least, we must aim at right administration to the individual, not to "the public." The conception of a perfectly safe anæsthesia to be conferred on all and sundry—be it by any one anæsthetic or by any method of dosage by that anæsthetic—is in our present condition of knowledge a conception only, not a realisation. "There are no rules in medicine," is an adage with a wide application. It cannot be too strongly urged on students that it is only by careful observation of every case that skill in anæsthetic administration can be obtained, and not by the blind adherence to any rule-of-thumb method of administration. Krohne's inhaler is an excellent and most useful apparatus, but it is not, as claimed for it, the solution of the difficulty and dangers of chloroform administration. Any experienced anæsthetist will know that difficulties and dangers arise in the course, say, of severe abdominal operations, which cannot be overcome by any one method, or by any agency save common sense born of experience in the use of all methods. That anyone can in time be anæsthetised by the gradual and methodical use of a Krohne inhaler I am prepared to admit. But that I ought to be able to go to any and every case with no other methods in my head or apparatus in my bag I am not prepared to agree to. Surely, Sirs, difference of opinion in such an important matter does not imply "lack of clear thought" or of observation as Mr. Harris suggests.—I am, Sirs, yours faithfully,

S. HENNING BELFRAGE, M.D. Lond.,
Senior Anæsthetist to the Samaritan Free Hospital.

Montagu-place, W., Dec. 13th, 1901.

## THE BRITISH ELECTRO-THERAPEUTIC SOCIETY.

*To the Editors of* THE LANCET.

SIRS,—At a meeting held on Dec. 13th it was unanimously decided that a society be formed for the study of electricity in its relation to medical science and that the said society be named "The British Electro-Therapeutic," also that a provisional committee be appointed, to consist of Dr. W. S. Hedley, Dr. Lewis Jones, Dr. H. G. Turney, Dr. J. H. Bryant, Dr. George Herschell, Dr. J. T. Ashton, Dr. H. McClure, and Mr. Chisholm Williams, to take the necessary steps for the organisation of such a society and to report to a meeting to be convened for Jan. 10th, 1902.

I am, Sirs, yours faithfully,

CHISHOLM WILLIAMS.

20, Bedford-square, W.C., Dec. 15th, 1901.

## DUODENAL ULCER AND ITS SURGICAL TREATMENT.

*To the Editors of* THE LANCET.

SIRS,—In speaking of perforation of a duodenal ulcer Mr. B. G. A. Moynihan, in his instructive paper on the subject in THE LANCET of Dec. 14th, p. 1656, indicates the direction which the fluid may be supposed to take—viz., to the hepatic flexure of the colon, along the outer side of the ascending portion, to the iliac fossa, and thence to the pelvis, &c.

I imagine that this applies to cases of sudden rupture and where much fluid escapes when a person is in the erect position, as in Mr. Moynihan's second case. To give the escaped fluid a chance of remaining localised it would seem in these cases of the utmost value to lay the patient in a recumbent position immediately, and to maintain him there at all costs. One so often sees patients brought to hospital who are suffering from ruptured gastric ulcer in vehicles which do not allow of their lying down. I believe that it is these journeys which are largely responsible for the wide extent of peritoneal infection. Recent inquiries into the anatomy of the right kidney pouch in the cadaver have convinced me of what great importance this area is for the localisation of pus and other fluids, especially those coming from the duodenal region. If the viscera be removed it will be seen that the hollow of the flank, of which the kidney pouch is the most dependent portion, sinks three inches below its lowest boundary wall, which is the brim of the pelvis. Pus or extravasated fluid, unless of very large amount, must find some difficulty in ascending this gradient in order to flow over the brim of the pelvis into its cavity while the patient is supine. And it is correspondingly much easier for appendicitic pus to pass down the flank and infect the kidney pouch. As the kidney pouch with its various diverticula under the liver and into the lesser omental sac is notably difficult to cleanse I should have been glad to have seen Mr. Moynihan recommend an incision at the outer side of the right kidney just below the last rib and drainage at that point. I am, Sirs, yours faithfully,

F. VICTOR MILWARD, F.R.C.S. Eng.

Birmingham, Dec. 16th, 1901.

## SMALL-POX AND VACCINATION.

*To the Editors of* THE LANCET.

SIRS,—There are many etters written to the medical papers now on the above subject, and some of the remedies suggested for inefficient vaccination are amusing if not instructive. Surely at a time when small-pox is daily increasing in

London and steadily finding its way into the provinces the Local Government Board should do something, and I venture to suggest three things easy of doing. 1. As the objection to vaccination is entirely due to ignorance in the great majority of persons (I am frequently told when I ask a patient what he thinks vaccination really is, "Oh, you give small-pox to a cow and then put the stuff out of the spots into our arms") to get the school board authorities to have vaccination explained shortly and simply to the pupils once in every term. 2. To supply all medical practitioners at a reasonable charge with pure calf lymph, or to get an Act passed prohibiting anyone from selling calf lymph without a certificate from the Local Government Board, which Board should have power to visit and inspect premises, animals, and operations, and to take away lymph for bacteriological and other examinations. 3. To alter the present vaccination certificate by adding to the form, "has been successfully vaccinated by me," the words "in —— places," and in any case where less than four places have been certified the vaccination officer should note such in his register and write to the parents or guardians of the child notifying that such vaccination is not protective for more than a few years and advise that the child should be revaccinated at or before the age of seven years.

I am, Sirs, yours faithfully,

Gravesend, Dec. 16th, 1901. C. J. W. PINCHING.

## THE WILLIAM SMYTH FUND.

*To the Editors of* THE LANCET.

SIRS,—May I be permitted to make a suggestion of a practical character as to the method by which, I trust, the widow and eight orphan children of that manliest and bravest of men, the late William Smyth of Burton Port, Donegal, can be secured, as they certainly ought to be, from every fear of want. When the case was brought to my notice, after forwarding my individual subscription I undertook, at the suggestion of the gentleman who mentioned the matter to me, to write a letter to the Liverpool papers in which, after briefly setting forth the case, I offered to receive and acknowledge any monies forwarded to me. The response has been very kind and generous both on the part of the medical profession and the public, sums of various amounts have been sent to me, and I have been able thus far to transmit to Sir Christopher Nixon £350 (inclusive of my own subscription), while there are still some £40 to send. The suggestion which I wish to make is that a senior and thoroughly well-known medical man in each of the large towns and cities of England, Wales, and Scotland should undertake a similar duty for his own neighbourhood, appealing to patients as well as to his medical brethren. The result would not be in the least doubtful. Sir Christopher Nixon and the distinguished gentlemen associated with him will look after Ireland.—I am, Sirs, yours faithfully,

Liverpool, Dec. 16th, 1901. WILLIAM CARTER.

## RASH AFTER TONSILLOTOMY.

*To the Editors of* THE LANCET.

SIRS,—In reply to the suggestion of Dr. Clement Dukes that the rash after tonsillotomy recently reported by me in THE LANCET was possibly the result of a soap-and-water enema, I should like to explain that no enema was administered in the case in question.

I am, Sirs, yours faithfully,

H. W. HENSHAW, M.R.C.S. Eng.,

Kew, Dec. 17th, 1901. L.R.C.P. Lond., D.P.H.

## EXCESS OF SALT IN THE DIET A PROBABLE FACTOR IN THE CAUSATION OF CANCER.

*To the Editors of* THE LANCET.

SIRS,—It is not in opposition to Dr. James Braithwaite's theory[1] of "salt being a probable factor in the causation of cancer" that I write, but against the assertion that the Jewish race, owing to their dietary laws, are not so liable to the disease. Among orthodox Jewish people as soon as meat arrives at the house it is washed and then *well sprinkled* with salt and allowed so to remain for half an hour or more, in order to dissolve out any fragments of blood that may remain in the tissues. That in itself is sufficient (if the salt theory be correct) to create a larger proportion of cases in the race *pro rata* to others. Though ham and bacon are excluded from their diet, let me assure Dr. Braithwaite that the latter is amply compensated for by smoked and pickled meats. No doubt, owing to their Oriental origin, Jewish people are particularly prone to dishes that are very highly seasoned, salt being one of the main ingredients. In conclusion, I could enumerate many cases of carcinoma amongst my friends and patients during the last few years, most of them never having tasted swine-flesh.

I am, Sirs, yours faithfully,

M. BERNSTEIN, L.R.C.P. Edin., &c.

Edgbaston, Dec. 10th, 1901.

[1] THE LANCET, Dec. 7th, 1901, p. 1573.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of Dec. 14th, p. 1686, you make the following remark upon the subject of my paper on the causation of cancer:—

> We believe, however, that a more systematic and widespread inquiry would show that cancer is not so uncommon amongst women and men of Jewish birth as has hitherto been supposed.

I think that I have tapped every source of information possible on this point and I send you the following extract from my paper, an abstract of which only has yet been published:—

> Dr. Abraham Cohen, physician to the Jewish out-patients at the Metropolitan Free Hospital, has very kindly looked up the registered causes of death of those buried by the United Synagogues of London. This covers the whole Jewish population of London with the exception of about 5000 or 6000 who do not belong to the Union. In the years 1899, 1900, and 10 months of 1901 there were registered 62 deaths from cancer—uterus two, breast nine, liver four, rectum two, throat two, stomach three, and one each of kidney, bladder, colon, pancreas, parotid, ovary, superior maxilla, abdomen, pelvis, tumour (died in cancer hospital), and "cancer" only, without locality, 30 cases. From these figures we arrive at the curious and unexpected conclusion that it is from cancer of the uterus chiefly that Jews are especially free. Taking, however, all forms of cancer, they are nevertheless subject to it as compared with the general population of London in the proportion only of 10·8 to 37·0—i.e., they are a little more than a quarter as liable to the disease as is the general population of London. In the two complete years, 1899 and 1900, the total deaths were 3798 from all causes, and of these 41 were from cancer, which gives one death in every 92 amongst the Jews, comparing with one in every 22 in the general population in 1896. We may take this in another way. The present mean Jewish population of London is said by the best authorities to be 105,000. Of these 100,000 are connected with the United Synagogues, and 5000 to 6000 are outside this Union. Out of this 100,000 41 died from cancer in the two years 1899 and 1900. This gives a mortality of 20 per 100,000, contrasting with 71 per 100,000 in the general population. The same result, therefore, works out as when the deaths from cancer are contrasted with the total deaths.
>
> Thanks to Dr. Henry Russell Andrews, Obstetric Registrar to the London Hospital, I have the following further figures and information. He writes: The total number of in-patients in the London Hospital in 1899 was 13,234, and in 1900 about 13,500. Jews and Jewesses and their children form about one-sixth of the total. This is not based on actual counting but, Dr. Andrews thinks, is quite sufficiently nearly correct to work upon. Quite one quarter are children under 10. In 1899 and 1900 there were 30 male and female Jews of all ages as in-patients with cancer (not including cancer of the uterus) in the ordinary medical and surgical wards of the hospital, as against 826 Gentile males and females of all ages—that is, one cancerous Jew to 2¾ cancerous Gentiles. The proportion of total Jewish in-patients to Gentile in-patients, calculated on the basis of 6 per cent., would, however, be one Jew to every 16½ Gentiles. So that from all possible sources of information on this subject, and calculated in every way possible, it always comes out that the Jews are much less subject to cancer than we are and that they are especially free from cancer of the uterus.

I should like it to be distinctly understood that my argument does not rest upon this question about the Jews but upon other and stronger grounds. The idea, however, was originated in my mind by the comparative immunity of the Jews.

I am, Sirs, yours faithfully,

Leeds, Dec. 13th, 1901. JAMES BRAITHWAITE.

## A DANGEROUS PRINCIPLE.

*To the Editors of* THE LANCET.

SIRS,—On Feb. 25th, 1901, I made personal application to the registrar of the Royal College of Surgeons in Ireland for a copy of their by-laws for the purpose of ascertaining did these in any way bear upon the following provision in the charters of 1844 and 1885:—

> And the examiners or any number of them declared by the by-law to be competent to transact business as a court of examiners shall in the presence of the President or in his absence of the Vice-President and two or more members of the council examine ..... any candidate for a Fellowship.

Upon that occasion I was informed that the by-laws were

being printed. On July 10th I wrote to the secretary of the council of the College, and was informed that when the by-laws were printed I could have a copy. Again on Nov. 21st I wrote in reference to the delay, and was informed that the council declined to give me a copy of the by-laws by advice of their solicitor. Having regard to the penal powers over its Licentiates possessed by the corporate surgical body concerned and to the dangerous principle now laid down by the President, Vice-President, and council of the Royal College of Surgeons in Ireland that they can withhold their by-laws from a Licentiate on the grounds of legal expediency, I beg space to lay this case before the profession through your valued journal.

I am, Sirs, yours faithfully,

Dec. 17th, 1901. S. WESLEY WILSON.

## THE QUESTION OF FEMALE MEDICAL RESIDENTS IN GENERAL HOSPITALS.

*To the Editors of* THE LANCET.

SIRS,—Reflecting upon what is taking place at Macclesfield, Stockton, and other places in connexion with the employment of lady doctors in hospitals and infirmaries, it has struck me that some decided and clear guidance is needed for the professional and public mind from the leading organs of the medical press. I have myself no prejudice at all against the study of medicine or even surgery by those of the female sex who are well qualified for it by the excellence of their character and education, provided that it leads them to work in suitable channels and does not from its nature demoralise and unsex them. It does appear to me that the delicacy and refinement of mind which constitutes so great a charm and which one always expects to find in every cultivated and modest young lady is hardly compatible with promiscuous mixture with the young house surgeons in our hospitals and small infirmaries or with attendance upon the injuries and diseases of adults of the male sex. The finer sensibilities of her nature must be blunted and soon sacrificed for all time when she can view without a shudder the call to treat venereal diseases and pass catheters, for example, for adult males. And what must be thought of the individual young lady who would desire to seek such occupation? I say nothing of the feelings of her male patients who are to be subjected to such an outrage upon common decency. The retort may be made that women have to submit to similar services from the opposite sex, therefore why not the men. There is a great distinction. For centuries men have in the main carried on this work, and there can be no question that they have gained the confidence and good will to an extraordinary degree of the great bulk of their female patients. The lady doctors will have to work hard to establish themselves even in an equal degree of trust from their own sex, and as time goes on they may perhaps succeed in doing so. But in mixing themselves up with the treatment of diseases of men it seems as though they would be likely to defeat their own object, as it shows a coarseness of mental fibre that men would scarcely be found to tolerate and the more refined minds of their own sex would certainly condemn. The employment of these young ladies in the women's and children's wards of hospitals when they possess the requisite skill appears to rest upon an entirely different foundation, and may under some circumstances be preferred. There is a practical difficulty to be overcome in infirmaries doing all kinds of work and employing two or three house surgeons. The senior house surgeon is in confidential relation with the managing board and with the whole of the medical staff of the institution; he requires his own room and it is necessary that he should have it to himself. The other two will often share their room together. Imagine a young fellow of 24 and a young lady of 23 thus thrown together in such intimate daily association. This is no imaginary picture. At an infirmary some years ago a very highly qualified and experienced surgeon was elected as second house surgeon and at the same time a young lady as his junior. The two junior house surgeons had previously been accustomed to join at their sitting-room, and therefore when the gentleman was elected he naturally wished to know whether it was expected that the same arrangement would be continued. When told that it would he immediately threw up the appointment. He said, what would his mother say! The lady made no difficulty, but expressed her willingness to accept the position. Afterwards the good sense of the board prevailed, and when another election took place shortly after separate rooms were arranged with considerable addition of expense and discomfort. In small general infirmaries it is frequently necessary for the house surgeons to interchange duties in the unavoidable absences of their colleagues, so that it becomes highly inexpedient and unpractical to appoint those who cannot when required take up the work in proper sequence. Where there are separate departments for children and women and no work is required amongst male adults, either as in-patients or out-patients, the circumstances are materially modified, and it then becomes a question of expediency and convenience as to housing and living, rather than of propriety and general decency.

I am, Sirs, yours faithfully,

Dec. 12th, 1901. X.

## PUBLIC HEALTH APPOINTMENTS.

*To the Editors of* THE LANCET.

SIRS,—Your readers will be aware that after this month all applicants for appointments in the public health service will require either to possess a special diploma or to have been similarly engaged during the past three years. Candidates registered before Jan. 1st, 1890, are exempt from special regulations, but I gather that the examination is of such a nature as to entail a special and protracted course of bacteriological and chemical laboratory instruction. Candidates registered since Jan. 1st, 1890, must submit entirely to the new regulations as to course of instruction, pupilage, &c.

Under these circumstances it appears to me that of the many hundreds qualified during the last 10 years only a favoured few, possessed of both money and time, can ever become medical officers of health unless they already hold that distinction. I am among those registered before 1890 and have held office as medical officer of health but not during the last three years. Though I am exempt from the strict regulations, still the examination is almost prohibitive, if my information be correct. Are all, except those recently qualified and so able to become diplomates before settling down to be debarred from holding these important offices? What I really wish to know is whether any diploma is within reasonable reach of a busy practitioner, and whether, considering that the new regulations must limit the number of applicants, the field offers sufficiently bright prospects to entice entry; or are all those posts to be left for the future to the young and recently qualified man? I shall be extremely grateful for any advice from yourselves and also from any of your readers.

I am, Sirs, yours faithfully,

Dec. 18th, 1901. LATE M.O.H.

*** Our correspondent will do well to consult Section 16 of the Local Government Act, 1888, from which he will see that every medical officer of health appointed after Jan. 1st, 1892, to a district of 50,000 or more inhabitants must either possess a diploma of public health or have been during some three consecutive years prior to 1892 medical officer of health to a district containing at least 20,000 inhabitants, or have been for not less than three years on the staff of the Medical Department of the Local Government Board. If "Late M.O.H." wishes for a diploma of public health he must pass the examination, although, as he was registered before Jan. 1st, 1890, the regulations as to study do not apply to him. Whether or not the diploma is within reach of a busy practitioner will depend largely upon the scientific learning which such practitioner has had and whether the interval which has elapsed since such training is a long or short one. So, too, the prospects must depend largely upon his age and qualifications. We should advise him to procure some of the recent examination papers and to ascertain whether there is any laboratory near at hand where he could do some chemical and bacteriological work.—ED. L.

## MEDICAL OR LAY SECRETARIES TO HOSPITALS.

*To the Editors of* THE LANCET.

SIRS,—With reference to the letter appearing in THE LANCET of Dec. 14th, p. 1699, over the signature of Dr. F. Bushnell, might I be permitted the liberty of indicating the reason

why lay secretaries, having to deal with matters of organisation and finance purely and simply, of hospitals, sanatoriums, and similar institutions, are preferred to, and are more successful as such than, members of the medical profession? It is to be found in the "specialised knowledge" possessed by such lay secretaries which is not obtainable in the medical man, or if so obtainable it is the exception, not the rule. To fill adequately and satisfactorily such a position it is business acumen and organising ability which are required, not professional knowledge. The question as to "whether medical candidates for such posts could be obtained" does not fully express what is required: the question rather should be whether medical candidates having sufficient competence and experience in such special branch could be obtained—to which question there can be but one answer. I inclose my card.

I am, Sirs, yours faithfully,

Dec. 13th, 1901. CHARTERED ACCOUNTANT.

## THE ORGANISATION OF THE PROFESSION.

(FROM OUR SPECIAL COMMISSIONER.)

*The Workmen and the Consultants at Birmingham.—Important Statistics relating to Contract Work.*

WE have seen that the proposed formation of a Consultative Institute at Birmingham brought all grades of the profession together in a common effort to resist this attempt to introduce commercial methods into medical practice. That such an attempt should have been made at all constitutes a further proof of the degrading effects of cheap contract work. This is a phase of the question on which it is impossible to insist too much. The great difficulty throughout has been to convince the general public that their interests and the interests of the medical profession are identical. Over and over again medical men have been accused of simply endeavouring to increase their incomes. There is, on the contrary, no profession more willing to work, not only for inferior pay, but, for the genuine poor, gratuitously. The argument is that if those who could pay did pay, then medical practitioners could afford to give full and careful attention to patients who could not pay at all and to those who could only pay very small sums, such as a penny per week. But if a large proportion of the public who can afford the usual fees enrol themselves in medical aid organisations, then the general practitioner, being thus deprived of his paying patients, has to make up in quantity for what he loses in quality. He has to put on his list several thousand subscribers at a penny a week to make up for a hundred or so patients at 2*s.* 6*d.* a visit. But if quantity thus replaces quality in the category of his patients so inevitably does the character of the attendance given also partake of the nature of quantity rather than quality. This is degrading to the profession and in nowise satisfactory to the patient. Thus the impression has gained ground that the club medical officer is an inferior man and a desire for something better has arisen. It was this feeling that led a large body of working men in Birmingham to support the proposal to create a Consultative Institute. The movement derived much of its strength from the dissatisfaction felt against club practice. It was also in a measure due to the extraordinary ignorance which prevails as to the meaning of the term "consultant." According to the popular opinion a consultant holds a much higher qualification than the general practitioner; he is supposed to have gone through a longer and more elaborate training, to have passed more difficult examinations, and to be altogether much more efficient. At a large meeting which was held previously to the formation of the Consultative Institute the working-men speakers clearly showed that they were under the impression that a medical man was trained either as a general practitioner or else as a consultant; and, if the latter, that he could advise on any disease with equal knowledge.

One of the medical practitioners in Birmingham who has taken an active part in the recent agitation, when discussing this question with me, expressed the opinion that perhaps this impression had arisen at the ambulance classes. Some workmen who attended these courses imagined that the teacher did not know more than what he taught. Hence, when they had completed the course, some of the pupils were apt to classify themselves with their teacher, thinking they know as much as he did; and, if this knowledge did not suffice, then both teacher and pupil must go to a consultant. The club medical officer has himself not infrequently helped to confirm this impression. To get rid of a tiresome patient he has been apt to advise him to go to the hospital, urging that the members of the hospital medical staff were so much more clever. The same has occurred in surgery cases, the club medical officer being anxious to avoid attending on patients who require more bandages than he can afford to give. Over and over again club patients are heard to say that their medical officer has candidly told them that he was not capable of attending such cases. Yet if these same patients had offered a 2*s.* 6*d.* fee he would have been just as ready to attend them as the consultant who claims a guinea. Again, the club medical officer suits the language he employs to his patients and describes their complaints by their popular names. The consultant, on the contrary, employs technical terms and the patient goes away with the impression that the consultant has discovered a new disease which has escaped the observation of the club medical officer who is but a general practitioner and is therefore supposed to be much less capable. One speaker at the general meeting mentioned above indignantly explained how his club medical officer had told him that he was suffering from dyspepsia, whereas a consultant had subsequently informed him that he was afflicted with gastric catarrh. Nor is the medicine given by the club medical officer held in any higher estimation. Several speakers held forth on the same occasion in deprecating terms about the club medical officers and their "stock" and "slop" mixtures. No one, not even Mr. Arthur Chamberlain, attempted to define what was meant by the term "consultant," but it was quite clear that the workmen wanted to have someone at their disposal to whom they could bring their medicine, who would smell the bottle, shake his head, and prescribe something better. They did not want a real consultant to meet their club medical officer and consult with him, but they wanted a sort of referee who would act as a check over him. They compared the general practitioner to the ordinary workman and thought that it was only right that a foreman should be set over him to keep him in order and to see that he did his work properly. The consultant was evidently destined to play the part of the foreman. He was to be held *in terrorem* over the much-maligned club medical officer. Nobody seemed to realise, and nobody was willing to explain, that such complaints as may be justifiable were due, not to any incapacity or inferior training on the part of the general practitioner, but to the system of contract work which compelled the club medical officer to do more work than could be properly accomplished in the time he could afford to give. What can be expected when the average remuneration for a consultation and for medicine only amounts to a few pence? It would in many instances be better if there was no payment at all, as there would then be no disguising the purely charitable character of the advice given. There would be fewer poor patients and more paying patients, and both categories would receive better attention, the general practitioner would not be overworked and could do his best for all alike, there would be better opportunities for the advancement of medical science, and the advantages reaped by the general public would be quite as great as those secured by the profession.

The great need of the moment is a better array of arguments that will help to place the public on the side of the profession—that will convince the patient that his interests are identical with those of his medical attendant. The money argument ought not to be the most effective. There are other and much higher considerations. Unfortunately, these latter are apt to soar over some people's heads. For this category of individuals Dr. E. D. Kirby, honorary secretary of the Birmingham and District General Medical Practitioners' Union, has collected some valuable statistics. They are not yet complete, as they only extend over a period of six months, and a larger experience may necessitate the altering of many of the figures given, but the general moral conveyed is likely to remain the same. The results obtained are totally unexpected and they reveal a new fact which may lead the public to look more closely into the system of contract work. As a rule the complaint is that the medical officer of a medical aid organisation is insufficiently paid, and the public generally have displayed a stoical indifference in regard to this grievance. Perhaps, however, this apathy may be somewhat

shaken if it can be shown that occasionally the grievance is the other way round, and that it is the public who pay too much. The figures collected relate to several Birmingham clubs and local branches of friendly societies and compare the receipts of the medical officers with the number of visits paid and consultations given during the six busiest months—January to June—of the year 1901. An appeal is made that similar statistics should be drawn up on a larger scale and for a more prolonged period. It is the club medical officers who alone can give such information. The statistics which have already been obtained show that there is an amazing difference in the scale of remuneration when it is compared with the actual work done. In some cases the amount suggested above was inadequate; but it is also made evident that in other instances the payment is more than necessary, so perhaps the public will take greater interest in the matter. The amount received in annual subscriptions has been divided into two parts. One-third of the sum has been allotted as fees or remuneration for visits made to patients in their own homes and the remaining two-thirds for consultations given at the medical officer's surgery. In both cases the medicines, bandages, &c., are included. Taking first the Manchester Unity of Oddfellows, it is found that 205 visits were paid and 656 consultations were given in the six months. Reckoned on the above principle, the payments made amounted to 1*s.* 1*d.* for each visit and 8¼*d.* for each consultation. For the members of a club which had its headquarters in Cannon-street there were 97 visits at 6*d.* each and 287 consultations at 4*d.*, but in another case there were 276 visits and 1104 consultations which brought in only 3*d.* and 1·95*d.* respectively. Another organisation, known as the Ebenezer, yielded for 109 visits about 1*s.* 11*d.* each and for 473 consultations about 9*d.* each. Other figures show 2*s.* 4½*d.* per visit and 7*d.* per consultation. One medical officer records 377 visits working out at an average of 2*s.* 3*d.* each, and 2836 consultations at 7*d.* each, and another medical officer calculates that he received 2*s.* 9*d.* per visit and 11*d.* per consultation. On the other hand, the Union Provident for 432 consultations and 63 visits yielded only 2*d.* and 7*d.* respectively. The Birmingham Mutual Old Age Society for 34 visits and 133 consultations showed an average of 2*s.* 1*d.* and 1*s.* 0½*d.*; and two courts of the Ancient Order of Foresters for 62 visits and 281 consultations paid as much as 2*s.* 10½*d.* per visit and 1*s.* 7½*d.* per consultation, which is a little more than what is generally considered the minimum fee. But the most interesting point is that while the scale of remuneration is frequently very inadequate, it is now and then very much more than necessary and the patients would be far better off if they selected their own medical adviser and paid him the usual fees. Thus there is in Birmingham a small society consisting for the most part of young men. Only six visits were necessary during the six months and consequently these brought in an average of 12*s.* 1*d.* per visit. There were, however, 102 consultations and for these the average was only 1*s.* 5*d.* If we add 1*d.* to each of these consultations, to bring them up to the 1*s.* 6*d.* minimum, this makes 8*s.* 6*d.*, and this amount we should deduct from the 72*s.* 6*d.*, paid for the six visits, and there would then remain 64*s.* for the six visits, or 10*s.* 8*d.* per visit. If the members had paid 2*s.* 6*d.*, the minimum fee per visit, this would have been 15*s.*; and deducting this sum from the 64*s.* there remains 49*s.* Therefore the members could have paid the minimum fees of 1*s.* 6*d.* and of 2*s.* 6*d.* and yet have saved 49*s.* out of a total expenditure of 217*s.* In this case, therefore, the members of the club were absolute losers. They could not choose their medical adviser, they had to accept the services of their club medical officer whether they liked him or not, and they paid him more than if they had sought medical advice in the ordinary manner. In another instance the amount paid per visit was 5*s.*, but the average payment per consultation was only 7½*d.*, so that the excess on one side is counterbalanced by the deficiency on the other side.

There is no difficulty in accounting for all these discrepancies. The remuneration does not depend on the amount paid but on the physical condition of the subscribers. This is an all-important consideration, for it clearly shows that no general rate of payment is applicable. For instance, it is thought absolutely scandalous to accept clubs at 2*s.* 6*d.* per head per annum, yet there are some clubs that pay very much better at this rate than other clubs where the members subscribe 4*s.* 4*d.* or even 5*s.* each. This is especially the case with seafaring populations. At Dundee crews engaged in whale-fishing only pay 2*s.* 6*d.* per head per annum, but as they are away for at least half the year this is equivalent to a payment of 5*s.* a year for persons who are on land all the time. Indeed, this applies to a certain category of workmen whose homes are in Birmingham but who are constantly being sent to work in other parts of the country. Then, again, if a new club is formed consisting of young members they will need very little medical attendance, while, on the other hand, clubs of long standing whose original members have grown old require a great deal. The mistake has been made of comparing members of a club with the general population, whereas it would suffice if young men paid 2*s.* 6*d.* a year, though perhaps 10*s.* a year would not be enough for the old men. Of course, if the young and the old, the healthy and the weak, were mingled in the same proportion as they exist in the population at large it might be said that a general average could be struck, but this is not the case—the figures dealt with above relate only to adult males and the discrepancies would be infinitely greater if women and children were introduced. Thus, to give yet another example, the medical officer of lodges or branches of the Oddfellows, of the Unitarian Brotherly, of the Rechabites, and of the Gas Workers' Union explains that each of these societies pay 4*s.* per head per annum. This brings him in an average of 1*s.* 2*d.* per visit and 7½*d.* per consultation. On the other hand, a society that pays only 3*s.* per head per annum yields 1*s.* 6½*d.* per visit and 8¾*d.* per consultation, while a smaller lodge, which also only pays 3*s.* per annum, works out at 5*s.* the visit and 9*d.* the consultation. In the face of such figures it is absolutely impossible to lay down a general rule. To obtain anything like a financial equilibrium it would be necessary that a young society should appoint a young medical officer, that this medical officer should never sever his connexion with the society, and that he should live as long as its young members. Then the medical officer would have an easy time of it during the earlier period, to be counterbalanced by more pressing work as he became older and felt a growing need of rest. His remuneration, of course, would be the same throughout. The only other way out of the difficulty would be to introduce a sufficient quantity of new and young members into the old societies, but the figures given above clearly prove that this is not done, at least to a sufficient extent. It will be seen, therefore, that the whole system of contract work requires to be studied anew and that an increase, even a considerable increase, of the subscriptions paid will not meet the difficulty. Sometimes the lowest pay is the most remunerative when compared with the work actually done. It will be necessary to find a new combination.

*(To be continued.)*

## MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

### *Memorial to the late Professor Thomas Jones.*

ON Dec. 11th a bronze medallion portrait and a brass tablet which have been placed in Owens College Medical School in memory of the late Professor "Tom" Jones were unveiled in the presence of a large number of students and friends. The memorial tablet also bears the names of Mr. W. Davies, Mr. J. C. Eames, and Mr. H. Aldred who died in South Africa—four valuable lives given to their country from Owens College. Nearly £1000 were subscribed by 275 friends, which sum, as Professor G. A. Wright said, might have been largely increased if a public appeal had been made. In addition to the medallion and tablet a sum of £852 14*s.* was handed to the college authorities for the foundation of an exhibition in anatomy. Eloquent testimony was given to the respect and affection felt for the late Professor Jones.

### *Stockport Infirmary.*

The harmony existing between the Stockport Infirmary board and the medical staff contrasts pleasantly with the troubled state of things at Macclesfield in the same county. At a meeting of the board on Dec. 11th a letter was read from the honorary staff presenting an installation of the x ray apparatus which has been erected at the infirmary. At the same time the honorary medical board expressed their pleasure at the harmonious relations which had always existed between the board of management and themselves. Colonel Howard, the chairman, in moving a vote of thanks

to the staff, said that they had before shown their generosity by the presentation of an operating-room.

*Manchester Companies Volunteer Medical Staff Corps.*

An interesting event took place in Manchester on Dec. 3rd, when a dinner, presided over by Surgeon-Lieutenant-Colonel W. Coates, was given in honour of the First Service Company of the Manchester Companies Volunteer Medical Staff Corps who have recently returned from South Africa. Mr. Walter Whitehead—or, as he should here be styled, Surgeon-Colonel Walter Whitehead—spoke warmly of the great sacrifice made by Captain Smith in going to South Africa when his seniority entitled him to a certain appointment at the Royal Infirmary and said that he thought he should receive some recognition of the excellent services he had rendered. Captain Smith said that at Bloemfontein the orderlies were for some time doing duty for 36 hours out of 48, and although the work was of a kind not altogether congenial to them he was sure that, if required, they would be willing to go and do similar work again. It was stated that the Medical Staff Corps sent out more men in proportion to their strength than any other arm of the service. A smoking concert was afterwards held and the annual prizes were distributed by Surgeon-Colonel Whitehead.

*Manchester Ear Hospital.*

Sir W. H. Houldsworth, M.P., presided over the annual meeting of the Manchester Ear Hospital held on Dec. 11th. During the year 202 in-patients had been treated and a large number of operations had been performed, while the out-patients had numbered 2438. Alterations and furniture had cost £250, of which sum the committee subscribed £125 19*s.* Hospitals are like empires, every extension involves increased work and greater expenditure. Last year the latter exceeded the income by over £87, and an appeal was made for an addition of £100 to the annual income. There is no doubt of the great good done by the Ear Hospital, and the people of the Manchester district will surely find the means asked for.

Dec. 17th.

## WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

*Cardiff Isolation Hospital.*

IN his last quarterly report the medical officer of health of Cardiff (Dr. E. Walford) draws the attention of the corporation to the necessity for enlarging the isolation hospital. This institution at present has accommodation, upon the Local Government Board basis of 2000 cubic feet for each patient, for 116 patients in six ward pavilions. Three of these pavilions have been in occupation only about a year and the remainder about six years. With the erection of three more pavilions, each for 22 patients, there would only be accommodation for 182 patients—none too much in view of the large number of working people who live in the town and of the readiness with which they avail themselves of the advantages of the hospital. The population of Cardiff at the last census was 164,000. Small-pox patients are now isolated in iron buildings situated upon land immediately adjoining the permanent hospital and Dr. Walford advises that a more remote site should be obtained upon which a permanent structure could be built. He expresses the opinion, also, that as the majority of cases of the disease come from vessels in the port the expense of a small-pox hospital should be borne by the port sanitary authority.

*Gratuitous Distribution of Antitoxin.*

Upon the recommendation of the medical officer of health the Neath Rural District Council has decided to supply antitoxin gratuitously to medical practitioners living in those portions of the district where diphtheria is prevalent.

*Prevention of Tuberculosis.*

At a public meeting held at Haverfordwest on Dec. 13th a sub-branch of the South Wales and Monmouthshire Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis was formed for the counties of Pembrokeshire, Cardiganshire, and Carmarthenshire. Dr. Douglas A. Reid, medical officer of health of Tenby, was elected secretary, and the executive committee were instructed to take into early consideration the desirability of erecting a sanatorium for the open-air treatment of consumption and a sanatorium for the treatment of tuberculous diseases in children.

*Water-supply of Bath.*

Until the last few weeks the ordinary constant supply of water to the city of Bath has not been interrupted, but the absence of any considerable amount of rain in October necessitated careful husbanding of the water in the reservoirs and there was no supply during a few hours daily. The average rainfall in Bath during the past 41 years in October and November was six inches, but during the same months in this year it was less than two inches. Since Dec. 5th the yield of the springs has improved considerably and it is anticipated that there is now no likelihood of the supply again running short.

*Coroners and Medical Men.*

On Dec. 9th an inquest was held at Bussage, Gloucestershire, upon the body of a man, aged 47 years, who died from the effects of a bicycle accident which had occurred on the previous day. A local medical man who was sent for after the accident gave a certificate in which death was stated to be due to a fractured skull, but he refused to attend the inquest unless he had a written order. The coroner said that he ought to have been present, adding that the death certificate was useless and that it was well known that medical men were not entitled to give certificates in cases of this kind, as the registrar would not accept them but would refer to the coroner. The jury returned a verdict of "Accidental death."

*Proposed National Museum for Wales.*

On Dec. 10th at Cardiff a deputation waited upon the county council with a view to inducing them to take up the matter of a national museum for Wales. It was urged that the museum committee should be allowed to call to their assistance outside aid and that the designation of the Cardiff Museum should be altered, seeing that the institution was doing a national work, and that its name should indicate its real nature. Eventually the matter was referred to a committee.

Dec. 16th.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

*University of Glasgow.*

AT a meeting of the University Court held on Dec. 12th the Finance Committee submitted a statement dealing with a report of the senate on the proposed changes in the scope of the chair of natural history. Hitherto the professor of this subject has had the responsibility of teaching both zoology and geology and Dr. Young's resignation is to be made the opportunity of establishing a scheme which always had his hearty support—namely, the institution of two distinct chairs. It has been announced that the Bellahouston trustees are prepared to provide £6000 towards the foundation of a chair of geology. The committee recommended that application be made to the Carnegie trust for the balance of the sum required and this suggestion was accepted by the court. The following appointments to examinerships are announced: Dr. Ebenezer Duncan in medicine and clinical medicine, Mr. Sydney Jones in surgery and clinical surgery, Dr. R. Barclay Ness in materia medica and therapeutics, Mr. Malcolm Laurie in zoology, and Mr. D. R. Boyd in chemistry.—At a recent semi-public function in Glasgow Principal R. H. Story, in replying to the toast of "The University," took occasion to discuss several academic questions of current interest. Dealing with the appeal for funds for further extensions of the college he said it was somewhat unfortunate that after 30 years the splendid buildings at Gilmourhill should be found inadequate. This result was due to two causes—first, that Sir Gilbert Scott in designing the buildings had thought more of architectural effect than of the demands of modern science, and, secondly, that the number of students, more especially on the scientific side, had so greatly increased. The principal urged the claim of the university to public support and argued that Mr. Carnegie's generosity had by no means solved all their financial problems. He expressed the opinion that the devotion of such a large sum of money to the payment of fees had been a great mistake and that many who had no claim to such assistance were availing themselves of the benefits of the gift. If university education were to be made free the task should be undertaken by the Government and should include the whole of the students. Principal Story also

referred to the criticism which had been passed in certain ultra-Protestant quarters on the action of the university authorities in sending a letter to the Pope in connexion with the recent celebration of the ninth jubilee of the university. He scoffed at the suggestion that such a letter was an indication of Romanising tendencies and described it as a mere courtesy to the direct successor of Pope Nicholas VI., to whose Bull the university owed its existence.—A sign of the times may perhaps be detected in the announcement that a course of six lectures on the Outlines of Local Government in Scotland is to be delivered in connexion with the class of political economy by Miss Mabel Atkinson, M.A.

*Glasgow Central Dispensary.*

At a meeting of the directors of this institution held on Dec. 15th the following appointments were made: Dr. F. J. Charteris to be physician, Dr. George Jubb to be assistant physician, and Dr. John Gordon to be surgeon in the department of urinary diseases.

Dec. 17th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

*The Smyth Fund.*

THE contributions to the Belfast branch of the fund for the widow and family of the late Mr. W. Smyth of Burton Port, co. Donegal, amount to over £800.

*Royal College of Surgeons in Ireland: New Regulations for Academical Costume.*

The general body of the Fellows are authorised to wear a black stuff Master of Arts gown, faced with a St. Patrick's blue Irish poplin border, five inches in width, narrowing round the collar behind and extending to each end of the gown in front. Inside the blue poplin there shall be a crimson Irish poplin lining, five inches in width, and of similar extent to the blue. A black velvet college cap with St. Patrick's blue and crimson tassel. This gown and cap may be worn at all public functions, college ceremonials, state and civic public meetings: and on all occasions when academical costume is worn by the general body of the Fellows of the Royal College of Surgeons of England and of the Royal College of Surgeons, Edinburgh.

*County Antrim Infirmary.*

At a meeting of the board of management of the County Antrim Infirmary, held in Lisburn on Dec. 13th, the chairman (Mr. J. M. Barbour) announced that his wife had invested £1000 in Northern Counties debenture stock for the use of the County Antrim Infirmary, the condition of the gift being that the interest should be paid to the County Antrim Infirmary so long as it remained in Lisburn, but in the event of that institution being removed from that town then the money would be devoted to some local charity for the benefit of Hilden and Lisburn. A very cordial vote of thanks was passed to Mrs. Barbour for her very generous gift.

*Dinner to Professor J. Lorrain Smith.*

A dinner by his old pupils was given to Dr. J. Lorrain Smith in Ye Old Castle Restaurant, Belfast, on Dec. 10th on his being appointed professor of pathology in Queen's College, Belfast. Between 50 and 60 persons were present, including the President of the North of Ireland branch of the British Medical Association, the President of the Ulster Medical Society, the President of Queen's College, Belfast, and Sir James Musgrave, D.L. (the founder of the chair), all of whom were invited guests. Professor J. Symington presided and the principal toast of the evening, which was very cordially received, was "The New Professor of Pathology," to which Dr. Smith replied.

*The Poor-Law System.*

A meeting was held in the Belfast Chamber of Commerce on Dec. 13th for the purpose of establishing an association for the province of Ulster which shall have for its objects the holding of conferences and the taking of steps to bring about amendments in the Poor-laws and in their administration. It was decided to form an Ulster Poor-law Conference Association, the objects being to promote united action on the part of Poor-law boards and other public bodies and persons interested in Poor-law administration in the province of Ulster and throughout Ireland; to procure such alterations in the law and in the regulations of the Local Government Board and such improvements in Poor-law administration as from time to time may be required; to promote the holding of conferences on Poor-law subjects; and to endeavour to bring about the assimilation of the Irish to the English law which gives a legal status to such conferences. A representative council of ladies and gentlemen interested in Poor-law reform was appointed to control and manage the affairs of the association.

*Death of Two Ulster Medical Men.*

I regret to announce the death of two Ulster medical men—Dr. Samuel H. Campbell of Portrush, co. Antrim, and Mr. John S. Ward of Lisburn, co. Antrim. The former gentleman was of advanced years, as he graduated M.D. of Glasgow in 1844. For a long time he was medical officer of the Portrush Dispensary and Admiralty surgeon, and he practised for many years in the well-known Irish summer retreat, Portrush, where he died on Dec. 12th. Mr. John S. Ward was an Englishman who came to Lisburn as a young man, to teach in the Ulster Provincial School, an institution belonging to the Society of Friends, of which he was a member. Later, after his marriage, he entered the business of pharmaceutical chemist and subsequently, in 1884 (after studying in Belfast and Edinburgh), he obtained the qualification of the Royal College of Physicians, Edinburgh. For a time he was assistant surgeon and apothecary to the County Antrim Infirmary, Lisburn, and he was surgeon to the Brookfield Agricultural School, Lisburn. Mr. Ward had been in his usual health on Sunday, Dec. 15th, when he attended the service in the meeting-house of the Society of Friends at Lisburn. He died suddenly the next morning from cardiac failure. Mr. Ward enjoyed the respect and esteem of a large circle of friends. He was buried at Lambeg on the 18th. He leaves a widow, but no family.

*Royal Victoria Hospital, Belfast.*

Lieutenant-Colonel Andrew Deane, I.M.S. (retired), has been appointed Superintendent of the Royal Victoria Hospital, Belfast.

Dec. 18th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

*Lumbar Puncture as a Means of Diagnosis in Fracture of the Base of the Skull.*

AT the meeting of the Society of Surgery held on Dec. 4th M. Poirier related the case of a patient who had been admitted to hospital under his care on Sept. 16th suffering from the sequelæ of a fall on the nape of the neck. He complained of pains in the head and of constant vomiting and had a wound of the skin in the occipital region. His temperature was 37·2° C. and his pulse was 110. On the day after admission he became semi-comatose and at times gave the hydrocephalic cry, but no paralysis was present. Cerebral meningitis was suspected. The *interne* of the ward performed lumbar puncture and a jet of cerebro-spinal fluid tinged with blood spurted out. Between 30 and 40 grammes of fluid were drawn off. This slight operation had a prompt and astonishing effect. Within a few hours the coma, the vomiting, and the headache had disappeared, and on the following day (the fourth since the accident) the patient talked about leaving the hospital. He continued to improve and, as if to confirm the diagnosis, paralysis of the right internal rectus and conjunctival ecchymoses developed in each eye. He left the hospital, although advised not to do so, on the eleventh day and was not seen again. In this case the diagnosis was cleared up by the result of the lumbar puncture and, moreover, the evacuation of the fluid seemed to have a remarkably beneficial effect. M. Rochard cited a case, that of a child with severe cranial injuries, in whom he had brought about rapid and marked relief by the withdrawal of 20 cubic centimetres of cerebro-spinal fluid. He also mentioned another case of fracture of the skull in which he performed lumbar puncture for the relief of persistent headache 15 days after the accident with marked relief. M. Tuffier remarked that he had already drawn the attention of the society to the value of lumbar puncture in fractures of the skull as a means both of diagnosis and treatment. He thought that the fluid should be collected in three separate tubes so as to make

certain that the red colour was that of the fluid itself and did not come from puncture of a spinal vein. The cerebro-spinal fluid might vary from a bright red to pink or yellow and contained no red corpuscles.

*Election to the Academy of Medicine.*

Dr. Albert Josias, physician to the Bretonneau Hospital, has just been elected a member of the Academy of Medicine. He is one of the few Paris hospital physicians who has turned his attention to the all-important subject of state medicine. He took his doctor's degree in 1881, his thesis being upon the subject of Typhoid Fever in Elderly Persons, the matter for which he had collected at the Tenon Hospital in the wards of Dr. Rendu. After serving as a prison surgeon in the central prison infirmary of the Seine, where he worked through the cholera epidemic of 1884 and the small-pox epidemic of 1887, he was made physician in succession to the Pitié, the old Trousseau, and the Bretonneau Hospitals. He is now consulting physician to the veterinary school at Alfort.

*Accidents to Workmen during the Exhibition of 1900.*

M. Wagner has written a thesis upon accidents occurring to workmen during the Exhibition of 1900. These figures deal mainly with the year 1899, in which year, of course, the works were in progress. During that year the Champs Elysées Station alone treated 1171 cases of accident and the Invalides Station 572. Eight deaths occurred, three from fracture of the skull, one from fracture of the spine, one from fracture of the pelvis, two from severe abdominal contusions, and one from drowning in the Seine. This is a high proportion of deaths seeing that the figures are those for one year only. Another table gives the figures of serious surgical accidents occurring in various works from the year 1896 to July 1st, 1901. There were 249 cases of injury to the eye and 152 fractures, of which 23 were cases of fractured ribs, 21 were of fractured fingers, 16 were fractures of the radius, and 16 were cases of Pott's fracture. These figures show that serious fractures like those of the skull or of the pelvis are by no means common. M. Wagner unfortunately gives no details of treatment. It is to be hoped that when the full medical report of the Exhibition is published details of treatment and of the after-progress of the cases will be given.

*Another Medical Play.*

The French stage continues to occupy itself more and more with medical subjects. One house follows another in producing plays of this description, the latest to do so being the Renaissance Theatre. Here there has just been given a new play by M. Masson Forestier, called *The Country Doctor*. It is a story of disillusion. A young medical man takes over a practice in a country district which, however, does not offer very great advantages. The other practitioner in the village is an elderly *officier de santé*, by name Palfrène, and most of the well-to-do patients much prefer "old Doctor Palfrène" to the young newcomer. Palfrène falls ill from pneumonia and his wife seeks the aid of the young practitioner, whose name is Valadier. He treats his patient after the latest fashion and among other things prescribes cold baths. This is too much for Madame Palfrène, who says that her husband shall be treated as he treats his own patients—namely, by bleeding. Valadier is obliged to agree under protest, for he knows that the Paris professor who has been called into consultation and who is just on the point of arriving, always argued that this method of treatment was quite out-of-date. When he arrives he congratulates his young colleague, for Palfrène is quite recovered, thanks to the bleeding. Valadier is much puzzled by this and comes to the conclusion that it is quite possible that in future he will prefer old modes of treatment to new.

Dec. 17th.

## SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

*Conjunctivitis due to a Specific Bacillus.*

DR. AUGUST COLOMB of Geneva has published a study of 97 new cases of conjunctivitis due to infection from a diplobacillus. Three years ago Dr. Chauvel of Paris, speaking in the name of the Academy of Medicine, remained very sceptical as to the existence of such a disease and the specificity claimed for it by Dr. Morax. He issued a warning against the multiplication of the number of varieties of conjunctivitis, but facts—stubborn things—have proved the claims of Dr. Morax. The studies of Dr. Gonin, of Dr. Colomb, and especially of Dr. zur Nedden of Bonn, who published a series of 500 cases, have decided the question. Dr. Colomb now contributes nearly 100 new cases casually, not systematically, collected during the last two years, thus proving that this specific conjunctivitis is very common. The examination of the secretion was made directly on the cover-glass and if possible corroborated by cultures in suitable mediums (bouillon, glycerine-agar, and Löffler serum). 46 cases showed the symptoms of subacute or chronic conjunctivitis, 27 of blepharo-conjunctivitis especially localised at the borders, and 24 cases combined conjunctivitis with acute blepharo-conjunctivitis. Dr. zur Nedden collected his 500 cases in 18 months and calls the disease very widespread. In chronic cases the staphylococcus aureus was also present. Dr. Colomb especially mentions in detail eight observations concerning children under one year of age observed by him and other medical men. Inoculation proves the contagiousness of the affection and infections in families (36 cases) go to prove this also. There is probably direct transmission from one mucous membrane to another. The bacillus keeps alive some days in an aseptic tube, though exposed to light, and retains its virulence; thus the mode of transmission through handkerchiefs and towels and similar articles is possible and probable. The bacillus is easily stained with violet of gentian, the counter-proof of Gram being necessary. A magnifying power of 800 is desirable to ensure exact diagnosis.

*Koplik's Plaques in Measles.*

Dr. Emil Feer of Basle, *privat-docent*, has made observations on 200 cases of measles. In 89 per cent. of all these cases the Koplik plaques were to be seen from one to three days before the appearance of the skin eruption. As the patchy discolouring of the mucous membranes in the fauces precedes the skin eruption by one day only, Koplik's plaques ensure prompter diagnosis. Examination by direct light is desirable as one can easily overlook the plaques in artificial light if they are small and very localised. They consist often of very minute white or bluish-white spots on the surface of the mucous membrane of the cheek, generally opposite the molars. They are often to be seen more distinctly when they have a tiny hyperæmic border. They never occur in any other disease, especially not in German measles (rötheln) according to Dr. Feer's exact examinations in 37 cases. Dr. Feer mentions Falkener's and Slawyk's studies on the subject which concur with his own, and says that Lorand found the plaques in 329 out of 349 cases, a percentage of 95. In some cases the diagnosis of measles in the incipient stage enables the medical man to make his diagnosis so soon that isolation proves of effect and the other children in the family escape infection. Such prophylactic measures must not be underrated as measles may prove very dangerous and sometimes fatal in young and feeble children.

Dec. 16th.

## NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

*Proposed Changes in the United States Army Medical Department.*

IN this country, as in Great Britain, although to a lesser degree, there has been for a considerable time grave dissatisfaction with the manner in which the Army Medical Department is conducted. Major W. O. Owen, surgeon, United States Army, read recently before the Academy of Medicine at Cincinnati a paper which voiced the sentiments of the malcontents and which has provided food for discussions in medical and lay journals. The author wants legislation by Congress to allocate the responsibility for insanitary conditions among troops and to provide punishment for the fault. He would likewise give the right of self-government to the Medical Department with regard to the supervision and transportation of medical supplies. Major Owen holds that the Medical Department should have in its hands all matters relating to the sanitary care of troops, so that its authority should not be overruled, as is often the case, by the commanding officer. Major Owen's plea that the medical department of an army should have complete and independent control of those matters which directly appertain to it

has much to be urged in its favour. However, so drastic a plan is impracticable. A training in the principles of sanitation at the military schools of the country could effect nothing but good, and such a step is recommended by the *Medical Record* and other medical journals. It also seems to be the general opinion that Major Owen's argument that the Medical Department should control its own transport is right. Increased powers granted to the Medical Department would prevent the recurrence of the state of chaos which prevailed during the Spanish-American war so far as the forwarding of medical supplies was concerned, and for which the Medical Department was wrongly held accountable.

*Report of the Surgeon-General of the United States Navy for 1900.*

This report has just been issued and it states that the health of the Navy and Marine Corps for the calendar year 1900 was satisfactory, although there was a slight increase in the ratio of admissions to the sick list per 1000 of strength as compared with that for the previous year. The average strength of the active list for 1900 was 23,756. The total number of admissions from all causes was 18,936; of these 15,829 were for disease and 3107 for injury, giving ratios per 1000 of strength of 688·90 and 145·52. During the year there were 211 deaths, the death-rate per 1000 of forces being 8·88, divided as follows: for disease, 5·01; and for injury, 3·87. The admissions to the sick list during the year included 1699 cases of epidemic catarrh, 983 of malarial diseases, 963 of wounds, 902 of diarrhœal affections, 828 of rheumatic affections, 336 of dengue, 246 of alcoholism, 195 of dysentery, 175 of typhoid fever, 160 of measles, 132 of mumps, 128 of heat stroke, 117 of pulmonary tuberculosis, 100 of organic heart disease, 99 of pneumonia, 40 of nephritis, 37 of rubella, 10 of small-pox, two of yellow fever, and one of bubonic plague. Epidemic catarrh was by far the most extensive and widespread complaint to attack the men of the United States Navy. The returns do not indicate that the unusual number of cases was due to conditions peculiar to the naval service, but rather that it was incident to a pandemic spread of the disease. Malarial affections were very common on the Asiatic and North Atlantic Stations. Typhoid fever was more prevalent than usual, especially in the tropics. Diarrhœal affections on the whole were less than in former years, but dysentery caused a larger number of admissions than in 1899. Dengue was, as in previous years, especially prevalent at Cavite, but the attacks were generally mild in type, ending in complete recovery and usually in immunity to the disease. Of the 10 cases of small-pox reported five proved fatal.

*The Water-supply of New York.*

A question to be faced by the new municipality of New York is that of the water-supply. No fault can be found with the generosity of those who planned the reservoirs which at present provide New York with water so far as quantity is concerned, but the quality at certain periods of the year is altogether another matter. Although analysis has demonstrated that even when most turbid the metropolitan drinking-water does not contain bacilli particularly harmful to health, yet at the same time it is on occasions disagreeable, not to say nauseous. The remedy for this state of affairs, according to experts on the subject, is to provide an efficient system of sand filtration. Such a measure would necessitate the expenditure of an immense sum of money, but the gain to the city from a health point of view ought amply to justify the primary cost.

*Vaccination and Tetanus.*

A short time ago several cases of tetanus occurred in Camden, New Jersey. The anti-vaccinationists, inspired doubtless by the fact that tetanus in St. Louis has been recently traced to impure diphtheritic antitoxin, proclaimed that lockjaw in Camden was due to poisonous vaccination lymph. This allegation was seized upon by the sensational lay journals and much prejudice has been aroused against vaccination. However, the Camden Board of Health have made a report on the matter which utterly refutes the mischievous statements made by the opponents of vaccination. They made a thorough and exhaustive investigation into the case and came to the following conclusions: "The tetanus cases in Camden are to be explained on atmospheric and telluric conditions which have prevailed in Camden during the past six weeks. There has been a long period of dry weather with high winds, so that tetanus germs, which have their normal habitat in the earth, dust, dirt of stables, &c., have been constantly distributed in the atmosphere. It is noticeable in all the cases after careful examination as to the cause that the wound had been exposed by the scab being knocked off or removed, or else the arm had been injured and infection resulted; frequently children scratched the vaccinated arm with their dirty finger-nails and infected the wound." It is satisfactory that proof has been brought to show that impure lymph was not the cause of the cases of tetanus in Camden and the report of the board of health of that town should tend to reassure the public as to the innocuousness of vaccination. At the same time the fatalities from tetanus in Camden proceeding indirectly from carelessness in guarding the wounds produced by vaccination should act as a warning and impress upon the minds of the vaccinated the need of carefully protecting such wounds.

Dec. 10th.

## AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

*Proposed Hospital for Consumption for Sydney.*

A DEPUTATION of medical men and prominent citizens of Sydney recently waited on the Premier to ask the Government to establish a special hospital for the treatment of consumption. The Mayor of Sydney, Sir James Graham, M.D. Edin., who introduced the deputation, said they wanted done for consumptives what was done for other infectious people. At present consumptives, because infectious, could not be admitted into ordinary hospitals. What was wanted was a State institution, within easy access of the city, containing about 200 beds, where these patients could be sent and treated till they could, if found suitable, be sent to sanatoriums in the country, or if unsuitable cared for till they died. The cost would be about £50,000. The Premier said that he had every sympathy with the proposal and was anxious to avoid delay. He intended to erect a wooden building as a tentative arrangement at Long Bay and would ask Parliament to vote the necessary money on the Supplementary Estimates. The construction of more extensive buildings could be considered later.

*Prince Alfred Hospital Extension.*

The report of the Public Works Committee on the proposed additions to the Prince Alfred Hospital which was presented to Parliament confirmed the expediency of the proposal, provided the cost did not exceed £45,000 and that such alterations were made in the plans as to ensure improved ventilation and lighting. The plans prepared and approved by the hospital board had been condemned by private architects examined by the committee. The wings, in which were to be situated the new lecture-rooms and operating theatre, would prevent a considerable part of the southern side of the pavilion for patients getting the sun in winter, while on the western side the wards were unprotected from the extreme heat of the summer. The Government architect, while not agreeing with their criticisms as to the general design, admitted that several objections as to details were worthy of consideration and submitted an amended design for the educational portion of each pavilion which embodied several of the improvements suggested by the criticising architects.

*Municipal Sanitation in Sydney.*

The outbreak of the plague has stirred up the Sydney Municipal Council to considerable activity in sanitation, and with a medical mayor and a "reform" council great progress has been made. One of the first steps was the appointment of a city health officer, and that officer—Dr. W. G. Armstrong—recently detailed to a number of medical practitioners, invited by the mayor, the sanitary work accomplished. Sanitary inspectors, most of whom had passed the tests of the London Sanitary Institute, had been appointed and assigned to definite districts and had to inspect every house in their respective districts at least twice a year and to record every sanitary fact about each dwelling at each inspection. Where defect was found legal action was taken to remedy it. A special inspector had been told off to look after common lodging-houses and he had reported on over 1000, their sanitary condition showing much improvement as regards air-space, ventilation, and cleanliness. Active measures of disinfection had been carried out in cases of scarlet fever, diphtheria, and typhoid fever, the existence of which was reported in a routine

way. Disinfection of premises where phthisis had occurred was also carried into effect. Whenever a death from phthisis occurred the house was visited and disinfection was offered, but other houses could only be reached through the voluntary aid of the profession. Fumigation had been discarded as a tedious, clumsy, and unsatisfactory procedure, and instead all walls, floors, and furniture were sprayed with formalin, and all linen, bedding, &c., were soaked in a solution of corrosive sublimate, 1 in 1000.

*Students' Fees at the Melbourne Hospital.*

A deputation, representing the council of the Melbourne University, the faculty of medicine, and the honorary staff of the hospital, recently waited on the committee of the Melbourne Hopital and asked that the increase in fees charged to medical students from £5 to £20 should not be continued, as it was excessive and would drive students to other medical schools where the fees were lower and where, moreover, greater advantages were given for the fees paid. The committee at a subsequent meeting decided that the fees for the full undergraduate course should be £10 10*s.*

*Charge against a Medical Man.*

Dr. Frederick William Marshall, a medical practitioner, was on Oct. 3rd tried at the Sydney Criminal Court for having performed an alleged illegal operation on a young woman. The jury found him not guilty.

*Return of Dr. J. A. Dick.*

A public welcome of a most enthusiastic nature was accorded to Dr. J. Adam Dick, of the Army Medical Corps, who has just returned from 21 months' active service in South Africa. Dr. Dick was with Lord Roberts, General French, and General Clements, and was mentioned in Lord Roberts's first despatch for special and meritorious service. Colonel Fiaschi said that there was no more ardent or devoted medical man at the front than Dr. Dick. In the crowded hospitals, on the long marches, on the field under fire, Dr. Dick always did more than his duty.

*Obituary.*

The news of the sudden death of Mr. R. S. Bright, M.R.C.S. Eng., L.M., L.S.A., of Hobart, was received with universal regret and sorrow by the profession in Australia. Mr. Bright was President-elect of the next meeting of the Australasian Medical Congress to be held in Hobart in February next, and it will be very difficult to fill his place. Mr. Bright was born in London in 1835, and began to practise his profession in Hobart in 1859. He was the senior member of the honorary staff of the Hobart Hospital and was president of the medical section of the Royal Society of Tasmania. He had by far the largest practice in Tasmania and was held in universal esteem both for his high professional attainments and his personal qualities. He took a deep interest in art and literature and was a member of the committee of the Hobart Museum and Art Gallery. He died in harness. He had some affection of the heart and was attacked with a little bronchitis on Sunday, Oct. 27th, but carried out his professional duties as usual. Towards morning he became very weak and he died in his sleep at 9 A.M. on Monday, Oct. 28th.—I also regret to have to record the death of Mr. W. Lloyd Mathias of Darlinghurst, Sydney, from pneumonia, at the early age of 37 years. Shortly after taking his qualifications of M.R.C.S. Eng. and L.R.C.P. Lond. he came to Sydney and entered into partnership with the late Dr. Kyngdon whom he subsequently succeeded. He was very popular both with the profession and the public.

Nov. 6th.

DONATIONS AND BEQUESTS.—Queen Charlotte's Hospital has received a grant of £100 from the Goldsmiths' Company and £10 10*s.* from the Salters' Company.—The Royal Dental Hospital, Leicester-square, has received £100 for the general maintenance fund and £100 for the new building fund from the Goldsmiths' Company, and £105 from an anonymous friend.—Under the will of the late Mr. Bernhard Charles Hirsch of Hampstead certain sums forming part of the residuary estate are left in trust to the following hospitals: to the North London Hospital for Consumption, £3000, and to the North-Eastern Hospital for Children, £1000. £1000 are also left for the endowment of a cot at the Great Ormond-street Hospital. The Prince of Wales's Hospital Fund will probably benefit to the amount of £25,000 or more.

# Obituary.

## DAVID RITCHIE PEARSON, M.D. EDIN., M.R.C.S. ENG.

DAVID RITCHIE PEARSON, who died on Dec. 5th, near Rye, in Sussex, was the son of the late Major Pearson, of the Honourable East India Company, and was born in April, 1837, and educated at Madras College, St. Andrews, and Edinburgh University. In 1858 he was appointed assistant surgeon to the Rifle Brigade and served for two years in India. He settled in practice in Kensington in 1863, where he remained until his retirement in 1900. Dr. Pearson served as assistant surgeon in the Tower Hamlets Militia and the London Scottish Volunteers. He was for 35 years honorary physician to the National Industrial Home for Crippled Boys and worked hard on the managing committee of that institution. He also helped to found, and took great interest in, the Kensington Dispensary, of which for 25 years he was physician and a member of the medical board. He was consulting physician to the Industrial Institution for the Blind and to the Working Ladies' Guild. Dr. Pearson was a man of attractive personality, gentle, wise, and dignified, with a touch of old world courtesy. He never acquired a very large practice, and amongst his patients were a considerable number of people of gentle birth but little fortune who seemed to gravitate into his kind and sympathetic hands and always commanded his utmost efforts for their welfare. But rich and poor gained confidence from his steadfast character and skilful handling and his memory will be held in affection and respect by many friends and former patients.

Dr. Pearson contributed some thoughtful papers to the Pathological and Clinical Societies of London and to the *British Medical Journal*. He married in 1869 Jane, eldest daughter of Mr. James Rae of Phillimore-gardens, Kensington, who survives him, and has left a family of several children, of whom four are sons; one, Dr. Allan Pearson, is in the Army Medical Service, another is in the Royal Engineers, and two are in the Indian Civil Service.

## JENKIN LLOYD, M.B., C.M. GLASG.

DR. JENKIN LLOYD of Bethesda, Carnarvonshire, died on Nov. 20th, at the age of 48 years, after an illness of only a few hours' duration. On the morning of that day he went out in his usual health, but returned at 11 A.M. feeling ill, soon passed into a state of unconsciousness and expired about 6 P.M. Dr. Lloyd was a native of Llanddeiniol, Cardiganshire, and received his medical education at Glasgow University, where he graduated as M.B. and C.M. in 1881. Returning to Wales he made his home in Blaenau Ffestiniog, but after some years he went to Bethesda as assistant to Dr. Hughes, ultimately becoming surgeon to the Bangor slate quarry. In 1891 he married the niece of Dr. Hughes, Miss Williams of Carnarvon, daughter of Ioan Mai, the well-known bard and *littérateur*. Dr. Lloyd was an ardent Welshman; he also had a reputation as an excellent bard and was a master of the difficult Welsh metres. His natural kindness of heart and sympathetic manner gained for him many friends, by whom he is much missed. The funeral took place on Nov. 23rd in Glanogwen Churchyard.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. C. E. Stoner, Professor of Surgery in the Iowa College of Physicians and Surgeons.—Dr. Francisco Melendez y Herrera, Professor of Anatomy in the Cadiz Medical School.—Dr. Gouguenheim of Paris.—Dr. Jarvis S. Wight, Professor of Clinical Surgery in Long Island College Hospital, Brooklyn.—Dr. Maseras, Professor of Medical Pathology in the Manilla Medical School.—Dr. N. Guardia, formerly Professor of Midwifery in the University of Caracas.—Dr. G. Chiarleoni, Professor of Midwifery in the Palermo Medical School.—Dr. F. de Castro, Professor of Medical Propædeutics in the University of Rio de Janeiro.

# Medical News.

UNIVERSITY OF LONDON.—At examinations held recently the following candidates were successful :—

M.B. EXAMINATION FOR HONOURS.

*Medicine.*—First Class: Alfred Ernest Jones (gold medal), University College; Henry Crewe Keates, Guy's Hospital; John Henry Sheldon, Owens College and Manchester Royal Infirmary; Harold Weightman Sinclair, St. Thomas's Hospital; and Charles James Thomas, B.Sc. (scholarship and gold medal), St. Bartholomew's Hospital. Second Class: Carey Franklin Coombs, St. Mary's Hospital; Myer Copians, Guy's Hospital; Robert Kelsall, Owens College and Manchester Royal Infirmary; and Albert Edward Thomas, St. Bartholomew's Hospital. Third Class: Ernest Gilbert Bark, Queen's and General Hospitals, Birmingham, and Birmingham University; William Henry Bowen, Guy's Hospital; John Charlton Briscoe, King's College; Ellen Mary Sharp, London (Royal Free Hospital) School of Medicine for Women; James Ernest Stratton, University College; and George Ernest Waugh, Cambridge University and University College.

*Obstetric Medicine.*—First Class: Alfred Ernest Jones (Scholarship and Gold Medal), University College; John Henry Sheldon, Owens College and Manchester Royal Infirmary; and Charles James Thomas, B.Sc. (gold medal), and Ernest Eric Young, St. Bartholomew's Hospital. Second Class: Olive Claydon, London (Royal Free Hospital) School of Medicine for Women; Carey Franklin Coombs, St. Mary's Hospital; Ellen Mary Sharp, London (Royal Free Hospital) School of Medicine for Women; Harold Weightman Sinclair, St. Thomas's Hospital; and William Henry Wynn, B.Sc., University and Queen's and General Hospital, Birmingham. Third Class: Arthur Edmunds, B.Sc., King's College; Robert Kelsall, Owens College and Manchester Royal Infirmary; and John Ford Northcott, Guy's Hospital.

*Forensic Medicine.*—First Class: Ellen Mary Sharp (scholarship and gold medal), London (Royal Free Hospital) School of Medicine for Women; and Albert Edward Thomas (gold medal), St. Bartholomew's Hospital. Second Class: Robert Ellis Roberts, B.Sc., St. Thomas's Hospital; and William Henry Wynn, B.Sc., University and Queen's and General Hospitals, Birmingham.

B.S. EXAMINATION.

*First Division.*—Janet Mary Campbell, London (Royal Fever Hospital) School of Medicine for Women; Felix Bolton Carter, M.D., University College; Arthur Edmunds, B.Sc., King's College; Ernest Lewis Lilley, Charing Cross Hospital; Charles Archibald Scott Rickout, St. Bartholomew's Hospital; Thomas Copeland Savage, University College; and Ralph Paul Williams and W. Halliburton McMullen, King's College.

*Second Division.*—William Fielding Addey, University College; Kenneth Bush Alexander, Guy's Hospital; William Billington, Birmingham Medical School and King's College; Charles Henry Bullen, Birmingham Medical School; Adrian Caddy, St. George's Hospital; Katherine Chamberlain, London (Royal Free Hospital) School of Medicine for Women; Carey Franklin Coombs, St. Mary's Hospital; David Leighton Davies, University College; Herbert Charlton Jonas, St. Thomas's Hospital; Helena Gertrude Jones, London (Royal Free Hospital) School of Medicine for Women; Henry Crewe Keates, Guy's Hospital; Robert Kelsall, Owens College and Manchester Royal Infirmary; Herbert James Marriage, St. Thomas's Hospital; Richard Rothwell Mowll, King's College; Frank Herbert Noke and William Trethowan Rowe, St. Bartholomew's Hospital; Douglas Wilberforce Smith, Guy's Hospital; William Lumsden Stuart, King's College; Kenneth Vincent Trubshaw, Guy's Hospital; Blanche Elinor Walters, Royal Free Hospital; Herbert Septimus Ward, Cardiff Medical School and St. Bartholomew's Hospital; Florence E. Willey, B.Sc., Louisa Woodcock, and Edith Louisa Young, London (Royal Free Hospital) School of Medicine for Women; and Ernest Eric Young, St. Bartholomew's Hospital.

N.B.—The foregoing lists, published for the convenience of candidates, are provisional only and are not final until the reports of the examiners shall have been confirmed by the Senate.

UNIVERSITY OF CAMBRIDGE.—At the examinations for medical and surgical degrees, Michaelmas term, the following candidates were successful :—

FIRST EXAMINATION.

*Part I., Chemistry and Physics.*—G. D. Alexander, B.A., Caius; F. W. Argyle, St. John's; F. O. Arnold, Trinity; J. Barcroft, M.A., and H. Bowring, King's; P. E. Braham, Clare; J. P. Buckley, Trinity; H. V. Byatt-Byatt and B. P. Campbell, Clare; H. B. Carlyll, St. John's; R. C. Chance, Trinity; H. Chapple, St. John's; L. Colledge, Caius; A. F. Comyn, Pembroke; R. Crawford, Jesus; N. R. Cunningham, B.A., and G. H. Davy, Caius; A. T. Densham, St. John's; H. Dimock, Sidney Sussex; A. C. J. Elwin, Corpus Christi; F. S. Eschwege and A. W. Ewing, Christ's; N. M. Fergusson, Magdalene; H. B. H. Follit, Clare; L. A. Fothergill, Emmanuel; N. H. Gandhi, Caius; G. Graham, Trinity; B. Haigh, Caius; H. W. Hesse, Trinity Hall; F. S. Hewett, Caius; T. R. Hodgson, Christ's; G. Hoffmann, Caius; W. D. Hopkins, Trinity Hall; N. W. Jenkin, Christ's; A. R. Jordan, Clare; J. L. Joyce, King's; R. P. Lamb, Trinity; A. A. H. Lawrence, B.A., and W. S. Leicester, Emmanuel; R. G. Markham, Caius; W. Mathieson, Sidney Sussex; L. Meakin and M. W. B. Oliver, Trinity; E. S. Perrin and A. H. Platt, Caius; A. V. Poyser, Magdalene; C. H. Rippmann, B.A., King's; J. H. Roberts, Emmanuel; S. H. Scott, St. John's; R. E. Smith, Emmanuel; C. Stanley-Clarke, B.A., Caius; F. A. Stockdale, Magdalene; O. Teichmann, P. B. Treves, B.A., and W. W. Treves, Caius; G. Walker, Trinity; K. M. Walker, Caius; D. R. P. Walther, Pembroke; C. E. Whitehead, Caius; and T. M. O. Williams, Christ's.

*Part II., Elementary Biology.*—F. O. Arnold, Trinity; E. W. Atkinson, Caius; J. Barcroft, M.A., King's; H. S. Berry, Clare; J. P. Buckley and L. S. T. Burrell, Trinity; H. V. Byatt-Byatt, Clare; H. J. B. Cane, Caius; F. Clayton and R. Colgate, Trinity; R. Crawford, Jesus; G. H. Davy, Caius; H. Dimock, Sidney Sussex; N. H. Gandhi and J. F. Gaskell, B.A., Caius; G. Graham, Trinity; B. Haigh, Caius; H. A. Hancock, Non-Collegiate; H. W. Hesse, Trinity Hall; F. H. Holl, Trinity; W. D. Hopkins, Trinity Hall; E. C. D. Marriage, Clare; J. H. B. Martin, Emmanuel; B. N. Nutman, Jesus; W. S. Perrin and A. H. Platt, Caius; C. H. Rippmann, B.A., King's; S. H. Scott, St. John's; R. C. Standring Smith, B.A., Catharine; H. H. Taylor, Pembroke; K. M. Walker, Caius; H. K. Waller, Trinity, and C. E. Whitehead and W. H. Williams, Caius.

SECOND EXAMINATION.

*Part I., Pharmaceutical Chemistry.*—W. A. Alexander, Caius; J. H. Board, Pembroke; L. B. Cane, King's; A. de C. C. Charles-Magdalene; H. J. Clarke, Trinity; E. B. Clayton, Caius; A. W. C. Drake, Pembroke; J. R. Draper, St. John's; D. Embleton, Christ's; M. F. Emrys-Jones, Caius; S. Gooding, B.A., St. John's; G. S. Haynes, King's; G. A. M. Heydon and G. Holroyd, B.A., Christ's; R. S. Jenkins, St. John's; C. E. M. Jones, King's; S. G. Luker, Pembroke; R. M. Miller, B.A., Clare; H. E. H. Oakeley, B.A., St. John's; E. V. Oulton, Christ's; D. G. Pearson, Pembroke; M. Phillips, B.A., Caius; J. H. Pratt, Trinity; F. Shingleton Smith, B.A., King's; S. J. Steward, Downing; R. Svensson, Caius; R. Wade, B.A., Christ's; B. Wahby, Non-collegiate; G. L. Webb, Caius; H. N. Webber, St. John's; A. Wilkin, B.A., King's; and W. H. Woodburn, B.A., and O. K. Wright, Christ's.

*Part II., Human Anatomy and Physiology.*—C. B. M. Aldridge, B.A., Christ's; E. Beaton, Caius; H. C. Cameron, B.A., St. John's; M. A. Cassidy, B.A., and H. M. Clarke, B.A., Clare; E. R. T. Clarkson, M.A., H. Selwyn; R. P. Cockin, B.A., Caius; W. I. Cumberlidge, Christ's; C. E. Droop, B.A., Trinity; T. Drysdale, B.A., Jesus; L. Dukes, B.A., Trinity; T. W. N. Dunn, Caius; R. G. Elwell, B.A., Trinity; H. J. Fardon, B.A., Christ's; N. C. Fletcher, B.A., Queen's; D. H. Fraser, B.A., Caius; S. H. Gibson, B.A., and H. E. Graham, B.A., Jesus; R. E. G. Gray, B.A., Pembroke; J. R. C. Greenlees, B.A., St. John's; C. F. R. Hall, B.A., Trinity; H. Hardwicke-Smith, B.A., St. John's; W. H. Hastings, Trinity; W. Hastings, Christ's; R. F. V. Hodge, Emmanuel; W. R. Honeyburne, Peter house; E. C. Hughes, B.A., and N. H. Illingworth, B.A., Clare; F. A. Juler, B.A., and C. King, B.A., Trinity; J. C. Lawton-Roberts, B.A., Clare; W. Lowe, B.A., Caius; G. H. K. Macalister, B.A., St. John's; J. McIntyre, King's; S. M. Mackenzie, B.A., Trinity; J. T. Macnab, B.A., Christ's; C. D. Mathias, B.A., Trinity; J. Mellanby, B.A., Emmanuel; A. H. Miller, B.A., Trinity; A. R. Moore, B.A., Caius; S. A. Owen, B.A., Trinity; C. E. Palmer, B.A., Caius; C. W. Ponder, B.A., Emmanuel; W. H. Robinson and E. W. Sheaf, B.A., Downing; G. C. E. Simpson, St. John's; W. H. Smyth, B.A., Emmanuel; W. H. Thresher, B.A., Caius; G. T. Western, B.A., Pembroke; W. P. Williams, Downing; E. K. Williams, B.A., Caius; and J. K. Willis, B.A., Queen's.

THIRD EXAMINATION.

*Part I., Surgery and Midwifery.*—J. F. Alexander, B.A., Trinity; J. A. Andrews, B.A., St. John's; L. B. Aveling, B.A., Christ's; L. E. H. R. Barker, B.A., Caius; G. D. Barton, B.A., Pembroke; J. M. Bennion, B.A., St. John's; E. Bigg, B.A., Caius; P. Bryan, B.A., King's; C. V. Bulstrode, B.A., Trinity; J. W. E. Cole, B.A., Corpus Christi; G. L. Crimp, B.A., Caius; H. Davies-Colley, B.A., Trinity; S. Dodd, B.A., Caius; F. P. Edwards, Downing; A. F. Elliott, B.A., Emmanuel; R. B. Etherington-Smith, B.A., Trinity; A. O. M. Fehrsen, B.A., Caius; W. S. Fox, M.A., Trinity; G. W. Greene, B.A., Downing; G. P. D. Hawker, B.A., Caius; F. B. Manser, Peterhouse; J. C. Matthews, B.A., Downing; C. L. Nedwill, B.A., Trinity; F. D. Nicholson, B.A., King's; G. B. Norman, B.A., St. John's; F. H. Parker, B.A., Pembroke; J. E. Payne, Peterhouse; J. S. Pearson, B.A., Trinity; H. V. Pryce, B.A., St. John's; R. M. Ranking, B.A., Pembroke; F. Richmond, B.A., Clare; C. Roper, B.A., Caius; E. A. Ross, Trinity; H. M. Scaping, B.A., Clare; E. S. Scott, B.A., Pembroke; W. T. Scott, B.A., Clare; H. J. Shone, B.A., Emmanuel; A. I. Simey, B.A., and G. E. St. C. Stockwell, B.A., King's; E. Weatherhead, St. John's; H. C. Williams, B.A., Pembroke; and J. A. Wood, M.A., St. John's.

THE Prince of Wales has now, we understand, definitely consented to become President of the National Association for the Prevention of Consumption and Other Forms of Tuberculosis.

ROYAL UNITED HOSPITAL, BATH.—The eighth annual amateur dramatic performances were given last week at the Theatre Royal, Bath, in aid of the funds of the Royal United Hospital. The pieces selected were *The Yeoman of the Guard* and *The Two Roses.* The performances were an undoubted success and it is thought that the hospital will benefit substantially.

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of the North-Western Branch of the Incorporated Society of Medical Officers of Health was held at the Victoria Hotel, Manchester, on Dec. 13th, when Dr. E. W. Hope described the administrative measures adopted in Liverpool upon an outbreak of plague. With regard to contacts the practice was to keep them in their own homes and for each one to be visited and interrogated daily for a fortnight. They were not taken to isolation homes belonging to the corporation. The annual dinner of the branch was subsequently held and was presided over by Mr. T. W. H. Garstang. The principal guest was Professor Sheridan

Delépine who was presented during the evening by Mr. Francis Vacher, on behalf of members of the society and others, with a silver rose bowl. The presentation was intended to commemorate the election of Professor Delépine as an honorary fellow of the society.

UNIVERSITY OF WALES.—The Prince of Wales has been unanimously nominated as Chancellor of the University of Wales.

BIRMINGHAM HOSPITAL SUNDAY FUND.—The amount of £5547 has been received from the Hospital Sunday offerings this year, a sum which has not been equalled since the year 1876. The authorities of the General Hospital are the recipients on the present occasion.

PRESENTATION TO A MEDICAL PRACTITIONER.—Mr. M. A. Adams, F.R.C.S. Eng., was on Nov. 29th presented with his portrait in oils in recognition of his long gratuitous and beneficial services as surgeon to the Kent County Ophthalmic Hospital. The portrait will be suspended on the hospital walls.

ROYAL BRITISH NURSES' SETTLEMENT FUND.—A sale in aid of this fund will be held on Feb. 6th and 7th, 1902, at 24, Park-lane, London, W., the residence of Lord Brassey. Princess Christian will open the sale and will preside at one of the stalls. The object of the fund is to secure a comfortable old age for nurses.

DRAINAGE OF DORCHESTER.—At the meeting of the Dorchester Town Council held on Dec. 10th it was reported that the Local Government Board had approved of the method of sewage disposal in connexion with the new scheme being altered to the septic system; an additional loan of £3000 for sewerage works in the extended part of the town was also sanctioned.

TAVISTOCK COTTAGE HOSPITAL.—In the Chancery Division on Dec. 10th an order was made with reference to the £10,000 recently left by the late Mr. Gill to the Tavistock Cottage Hospital. It was decided that the authorities of the hospital should erect a wing to be called the Gill Wing at a cost of about £1500 and that the income of £10,000 should be applied to its maintenance, and an order was made accordingly.

BEQUESTS TO WEST OF ENGLAND CHARITIES.—The late Mr. E. Halsall of Bristol, who died in September last and who was for more than 50 years a member of the executive committee of the Bristol General Hospital, has bequeathed £200 each to the Bristol General Hospital and the Bristol Royal Infirmary.—The late Mr. H. D. Skrine of Claverton Manor, Somerset, has bequeathed £100 each to the Royal United Hospital, Bath, Bath Mineral Water Hospital, and the Bath Eye Infirmary.

MEASLES AT EXMOUTH.—At the meeting of the Exmouth District Council held on Dec. 4th, the medical officer of health reported that an outbreak of measles commenced in the middle of June and lasted until September. The total number of notifications received was 235 and 15 cases ended fatally, the rate of mortality being 6·38 per cent. He added that the number of notifications did not correctly represent the actual number of cases, for a large number of children had not been attended by a medical man and consequently were not reported.

BRIDGWATER INFIRMARY.—The eighty-eighth annual report of the Bridgwater Infirmary has just been issued. It states that during the 12 months ended August 31st last 339 in-patients had been admitted, compared with 348 in the previous year. The out-patients numbered 2141, against 2149 in 1900. The financial statement shows that the total income amounted to £3201, and the expenditure was £2314. The Hospital Sunday Fund amounted to £228. The reserve fund of the institution now amounts to £6800.

SUICIDAL MANIA.—At the Bristol Lunatic Asylum on Dec. 11th an inquiry was held concerning the death of a female patient, aged 50 years, who escaped on Dec. 9th and whose body was subsequently found in the river which runs close to the institution. A nurse whilst bathing the patients had left the keys of the ward doors on the bath-room mantelpiece, and the deceased contriving to get them was able to let herself out. A verdict of "Suicide whilst of unsound mind" was returned, and the coroner reproved the nurse for allowing the keys to go out of her possession.

# Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ADDINSELL, J. H., M.R.C.S., L.R.C.P., has been appointed House Accoucheur to King's College Hospital.

BALDWIN, G. P., L.R.C.S. Edin., has been appointed Public Vaccinator for the Shannon District of New Zealand.

BOAG, JAMES, M.B., M.S. Glasg., has been appointed Certifying Surgeon under the Factory Acts for the Wishaw District of Lanarkshire.

BREHAUT, A. H., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

BULTEEL, C. E., M.R.C.S., L.R.C.P., has been appointed House Physician to King's College Hospital.

CABLE, F. C., M.R.C.S., L.R.C.P., has been appointed House Physician to King's College Hospital.

CHEATLE, GEORGE LENTHAL, C.B., F.R.C.S., has been appointed Surgeon to the Italian Hospital, Queen-square.

COATES, C. M., L.R.C.P. Edin., L.R.C.S. Edin., has been appointed Certifying Surgeon under the Factory Acts for the Creech St. Michael District of Somerset.

CUDMORE, ARTHUR MURRAY, M.B. and Ch.B. Adel., M.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Adelaide Hospital, Australia.

DEANE, ANDREW, M.D., F.R.C.S.I., Lieutenant-Colonel, I.M.S. (retired), has been appointed Superintendent to the Royal Victoria Hospital, Belfast.

HAMILTON, T. K., M.D., F.R.C.S.I., has been re-appointed Director of the Local Board of South Australia of the Australian Mutual Provident Society.

HIND, WHEELTON, M.D. Lond., F.R.C.S. Eng., has been appointed Senior Honorary Surgeon to the North Staffordshire Infirmary and Eye Hospital.

HOWSE, N. B., M.R.C.S. Eng., V.C., has been appointed Visiting Surgeon to the Gaol, New South Wales.

JOHNSTON, S. E., M.B., C.M. Edin., has been appointed Assistant Resident Medical Officer to St. Mary's Hospital for Sick Children, vice T. E. Frazer-Toovey.

KELYNACK, T. N., M.D., M.R.C.P., has been appointed Assistant Physician to the Mount Vernon Hospital for Consumption, Hampstead, Northwood, and Fitzroy-square.

MAXWELL, W. W., M.B., Ch.B. Edin., M.R.C.S., L.R.C.P., has been appointed House Physician to King's College Hospital.

MCLEOD, J. A., M.R.C.S., L.R.C.P., has been appointed House Accoucheur to King's College Hospital.

PARKE, T. H., M.R.C.S., L.R.C.P. Edin., has been appointed Certifying Surgeon under the Factory Acts for the Tideswell District of Derbyshire.

PEREIRA, JOSEPH ANTHONY WENCESLAUS, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Exeter Workhouse.

POOLER, EDWARD LESLIE, M.D. R.U.I., L.K.Q.C.P.I., has been appointed Medical Officer to the Destitute Poor and Aborigines of the District of Stirling, South Australia.

ROGERS, F. C., F.R.C.S.E., L.R.C.P.E., has been appointed Medical Officer of Health to the Erith District Council, vice Mr. John Elliot, resigned.

STANTON, W. D., F.R.C.S. Edin., has been appointed Honorary Consulting Surgeon to the North Staffordshire Infirmary and Eye Hospital.

STUART, W. L., M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

WILLCOX, H. L., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

WORGER, R. G., M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed Surgeon under the Factory Acts for the Radstock District in the County of Somerset.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Surgical Officer. Salary £60, with board, washing, and attendance.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary £150 per annum, with rooms, fire, lights, and attendance.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, single. Salary £100 per annum, with board and residence.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, Chelsea, S.W.—Honorary Surgeon.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, N.—Second House Physician for six months, with board, washing, and residence. Salary at the rate of £30 per annum.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon and Assistant House Surgeon. Salary, House Surgeon £100 per annum, Assistant £50 per annum, with apartments, board, and lodging.

EYE AND EAR INFIRMARY, Liverpool.—House Surgeon. Salary £80, with residence and maintenance.

GLASGOW ROYAL INFIRMARY.—Superintendent. Salary £500 per annum with board, residence, &c.

GREAT NORTHERN CENTRAL HOSPITAL.—Assistant House Surgeon for six months. Salary at the rate of £30 per annum, and board.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians for six months. Honorarium of £25.

JAFFRAY BRANCH OF THE GENERAL HOSPITAL, Gravelly-hill, near Birmingham.—Resident Medical and Surgical Officer. Salary £150 per annum, with board, residence, and washing.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House Surgeon. Salary £140 (increasing to £170), with rooms and attendance.

LANARK COUNTY ASYLUM, Hartwood, Glasgow.—Third Assistant Medical Officer and Pathologist. Salary £120 per annum, with fees, board, washing, and residence.

LIGHTBURN JOINT HOSPITAL FOR INFECTIOUS DISEASES, Shettleston, near Glasgow.—Resident Physician. Salary £130 per annum, with board, &c.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead, and Northwood, Middlesex.—Honorary Anæsthetist.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich. — Junior Assistant Medical Officer, single. Salary £120 per annum, with board, lodging, and washing.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Surgeon. Salary £100, with board, lodging, and washing.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

ROYAL DEVON AND EXETER HOSPITAL, Exeter.—Senior Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, lodging, and washing.

ROYAL HOSPITAL FOR INCURABLES, Donnybrook, Dublin.—Resident Medical Officer, unmarried. Salary £150, with board and apartments.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—Assistant House Surgeon required for six months. Remuneration at rate of £50 per annum, with board and residence.

ST. BARTHOLOMEW'S HOSPITAL.—Surgeon.

ST. THOMAS'S HOSPITAL.—Resident Assistant Physician.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House Surgeon. Salary £100, with board and residence.

STATE CRIMINAL LUNATIC ASYLUM, Broadmoor, Crowthorne, Berks.—Junior Assistant Medical Officer, single. Salary £175, rising to £200 per annum, with furnished quarters, coal, gas, and attendance.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

SUNDERLAND INFIRMARY.—House Surgeon. Salary £100, increasing, with board and residence.

WESTMINSTER GENERAL DISPENSARY.—Honorary Surgeon.

WESTMINSTER HOSPITAL, opposite Westminster Abbey.—Aural Surgeon.

WESTMORLAND CONSUMPTION SANATORIUM.—Resident Medical Officer, single. Salary £150, all found.

WHITECHAPEL UNION INFIRMARY, Vallance-road, N.E.—First Assistant Resident Medical Officer. Salary £130 per annum, rising to £150, with rations, apartments, coal, gas, and washing.

# Births, Marriages, and Deaths.

## BIRTHS.

ROE.—On Dec. 11th, at 121, Old-street, E.C., the wife of William Francis Roe, L.R.C.P.I., L.R.C.S.I., and L.M., of a daughter.

SUTHERLAND.—At 32, George-square, Edinburgh, on the 17th inst., the wife of L. R. Sutherland, M.B., Professor of Pathology, University of St. Andrews, a daughter.

THOMSON.—On Dec. 15th, at Kirkston, Spa-road, Radipole, Weymouth, the wife of David Thomson, L.R.C.P. Edin., L.R.C.S. Edin., L.P.F.S. Glasg., of a son.

## MARRIAGES.

ATKEY—MENZIES.—On the 14th inst., at Holy Trinity, Ryde, by the Rev. W. M. Cameron, vicar, Percy J. Atkey, M.R.C.S., L.R.C.P., D.P.H. Camb., of Southampton, eldest son of C. J. Atkey, Esq., Exmouth (late Streatham), to Barbara, only daughter of the late Captain William Menzies, R.N., and Mrs. Menzies, Ryde.

BATTY—ROY.—On the 17th inst., at S. Peter's, Southborough, James Henly Batty of the Gold Coast and London, to Violet, widow of the late Professor Roy, F.R.S., and daughter of the late Sir George E. Paget, K.C.B., F.R.S., of Cambridge.

BOWEN-JONES—EVANS.—On Dec. 12th, at Saint Catherine's Church, Neath, South Wales, Lloyd Bowen-Jones, M.R.C.S., L.R.C.P. Lond., D.P.H., to Clara, daughter of the late Edward Evans, Esq.

FOSTER—DALLAS.—On Dec. 12th, at Christ Church, Brockham, by the Rev. P. G. Ward, M.A., vicar of Braughing, Herts, M. Bernard Foster, M.R.C.S. Eng., L.R.C.P., D.P.H. Lond., of Puckeridge, Herts, younger son of Michael E. Foster, of Brockham, Surrey, to Gertrude Mary, elder daughter of Seymour Dallas, J.P., of Kimberley, S. Africa.

STAHLKNECHT—GARDNER.—On Dec. 12th, at the parish church, West Kirby, Cheshire, Bernard Stahlknecht, M.B., Ch.B. Vict., to Ethel Cleland, only daughter of R. B. Gardner, of West Kirby.

TAUNTON—SMITH.—On Dec. 12th, at St. Peter's Church, Bengeworth, John Godfrey Cresswell Taunton, M.R.C.S., L.R.C.P. Lond., to Edna Harriet, eldest daughter of Mr. and Mrs. Edwin Smith.

## DEATHS.

SPENCE.—At Burntisland, on the 11th inst., Annabella Bain, wife of Robert Spence, M.B., C.M.

WILLIAMS.—On Dec. 14th, at Cheap-street, Sherborne, Dorset, Mary, widow of the ate W. H. Williams, M.D., aged 79.

***N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.***

# Notes, Short Comments, and Answers to Correspondents.

## MEDICAL AID SOCIETIES AND THE GENERAL MEDICAL COUNCIL.

*To the Editors of* THE LANCET.

SIRS,—We will not combine ourselves—why? Because there are many in the profession who would not be happy if they had not the idea in their heads that they were taking someone else's patients or holding some miserable club which someone else wanted. May the Medical Defence Union grow so strong that it may be able to swamp out all medical men who degrade a noble profession by pandering to the public for their own (as they think) gain.

I am, Sirs, yours faithfully,

Dec. 16th, 1901. GENERAL PRACTITIONER.

*To the Editors of* THE LANCET.

SIRS,—Certainly, we English are droll. A short time since our hospital out-patient department was the bogey, now it is medical aid societies, and for the time being nothing can be said too bad about them. We have a society formed to put them down; the said society lays its grievances before the General Medical Council; which in turn notifies by circular that "the Council strongly disapproves of medical practitioners associating themselves with medical aid associations." Next the Council convicts an unlucky wight for committing the offence and postpones action for six months. Why? Because the Council knows full well that it can do nothing. Can they remove a man from the Register for "infamous conduct in a professional respect" in taking low fees? If so, the millennium is surely close at hand. Would not an action lie against the Council if it did so? and would not an appeal to the Privy Council soon declare that removal for such a cause was *ultra vires?* The fact is that the General Medical Council knows no more about the doings of general practitioners than—nor indeed so much as—a "jury of matrons." It is composed of nominees of the Colleges and has no interest in general practitioners who form at least three-fourths of the men on the Register, and therefore it is fortunate that it really has no power over them. The Council was appointed to regulate the examinations for qualifications and to register those who were qualified; and if it be necessary, as I hold it is, that the relations of medical practitioners with each other and the public should be regulated this must be done by a house of representatives. To have the General Medical Council constituting itself a trade union when "the trade" is not represented is absurd on the face of it. I am aware that medical aid associations have injured and tyrannised over medical men in some districts, but this is by no means general. In my own locality they have been useful. No attempt has been made to enrol other than working-class members. One cannot, and one would not, wish to refuse attendance on the poor, but they *cannot* pay long bills and they do not pay one-fifth of what is sent in to them, and what they do pay is reduced by collector's commission—which simply represents the percentage retained by the medical aid societies—and I always look upon it that every £50 received from a medical aid society as so much to the good and that it relieves me of at least £250 of bad debts. Any business-like set of practitioners could frame regulations which would stop the canvassing of other men's patients and the admission of those whose income places them above the assistance of such associations, or the placing of paid servants of a society in a town to compete with the resident practitioners. But if the Council is asked to excommunicate all those who take low fees what shall we ask them to do with those experts and specialists who in hospitals provided by the benevolence of the charitable attend *gratuitously* both in- and out-patients, 75 per cent. of whom are well able to pay for medical attendance?

I am, Sirs, yours faithfully,

Dec. 18th, 1901. ANTI-HUMBUG.

## LOOKING BACK.

*To the Editors of* THE LANCET.

SIRS,—In your interesting, amusing, and, I may add instructive, quotation from THE LANCET of Nov. 30th, 1823 (I say instructive because it affords a comparison between the tendency of thought of the present school and that of a period more closely allied to mediæval times), I may be pardoned if I remark that I do not think the views of Dr. Pearson run current with the present age without a grain of salt. The nearest resemblance, as I conceive, to this remarkable Biblical narrative as a natural process consists in pike-fishing, a pastime which as a youth I was an ardent lover of, and it so happened that what is known as "live-bait fishing" was my favourite branch of the art. As every fisherman knows, when the pike are not ferocious, or, to use the sporting term, "not on the feed," the float may disappear and reappear after a short interval, the live bait having been disgorged, but still living, thus enabling one to throw out the same bait without rebaiting. This is a very different situation from Jonah's, who was disgorged after an incarceration of three days; but it occurs to me as the nearest resemblance. Now, according to Dr. Pearson's hypothesis,

the narrative of Jonah reported no miracle at all, but solely natural phenomena; indeed, according to his account, to put it plainly, Jonah seems to have suffered, after three days' immersion, little or no inconvenience. However, taking a more scientific view of this case, Dr Pearson appears to have established the fact—if a fact—early "that the stomach had no power over substances imbued with vitality."

With regard to what Dr. Pearson terms the "minor point"—that is to say, how Jonah procured his sustenance—this can easily be disposed of apart from the miraculous, because the fasting experiments of modern times clearly eclipse Jonah's record for prolonged starvation; but with regard to the "respiratory process" this appears to me to be more difficult and enigmatical to account for according to natural phenomena. A case was reported in the daily papers some time ago of a whale (and let us assume the fish to have been a whale) at an aquarium which was unfortunately drowned through the intrusion of an insect rendering the valve of the ear inoperative, and it occurred to me when I read thereof how long, roughly speaking, a whale could remain under water without rising in order to recharge its breathing apparatus. I believe about four minutes is specified as the limit for man to sustain complete submersion, still retaining life—that is to say, amenable to resuscitation. How long could the whale thus remain? It might be possible for the whale to compensate Jonah. ... supplying air for changed atmospheric conditions, these points being beyond me, although I venture to guess that Jonah had a miraculous escape from death by drowning or suffocation.

With regard to Dr. Pearson as a logician he appears to me to have outwitted himself, because, supposing he could have explained all the remarkable narratives in Scripture by natural causes, he clearly undermines Scripture, because the Gospels insist upon the miraculous. What he would gain in one direction he would lose in another. The only question remains whether his advocacy was a hindrance rather than an aid to Christianity. I am, Sirs, yours faithfully,

Peckham, S.E., Dec. 14th, 1901. CLEMENT H. SEBS.

## FEES FOR INSURANCE EXAMINATIONS.

*To the Editors of* THE LANCET.

SIRS,—Kindly favour me with space for a few lines in reply to the letter that appeared in your last issue. It contains at least three grave misstatements: (1) The examination required is *not* "unusually rigorous"; (2) the report does *not* consist of "three sides of foolscap"; (3) the medical questions are *ten* in number, not "60," as stated by your correspondent. The fee for examinations has been fixed by our medical advisers at 10*s.* 6*d.*, and for the report in question this has hitherto been regarded as a reasonable fee. Apart from this company, the societies providing sickness benefit are chiefly friendly societies, and I understand that candidates for admission to these societies are frequently examined for considerably less than even 10*s.* 6*d.*, and I do not remember to have heard any demand for a guinea fee, which, of course, would be impossible.—I am, Sirs, yours faithfully,

HENRY BROWN, Manager.

The Century Insurance Company, Limited, Edinburgh, Dec. 16th, 1901.

## FRIENDLY SOCIETIES AND THEIR MEDICAL AID INSTITUTIONS.

*To the Editors of* THE LANCET.

SIRS,—My letter on the above subject was simply to demonstrate the illegal position of these institutions and the grave abuses which are inherent to their constitution. Your correspondent, "C. W.," complains of my language and reads into my letter the word "insolent" which I did not use. If I wished to introduce a personal element into this discussion I could not do so, for "C. W." is to me only two alphabetical signs, and I have no such desire. I attack a system, not a person; and having fought that system now for 20 years I shall not try to conciliate it by smooth words. If the committee of a hospital were to employ their house surgeon to attend them as charity patients we should have a case approaching that supplied by medical aid societies. The pence of the poor pay for the cheap doctoring of the middle class—the publican, the tradesman, the schoolmaster. The whole thing on the part of these people, who need no concession from the profession, is a piece of Pecksniffian philanthropy. "C. W." compares medical aid associations with insurance companies. The latter canvass; they do not. I admit there is no direct canvass; it is not needed. The friendly societies are so fully organised that by simply including wives and children they have at once a large enough number of members to secure the services of a medical attendant. *They* start the practice when they first advertise, *they* carry it on by the aid of their professional—or unprofessional—nominee, who is solely and simply their servant and is usually paid at the rate of 2*d.* to 3*d.* a consultation, including visits. His name upon the doorplate *covers* this co-operative society, which is behind him, engages him or dismisses him. "C. W." quotes Sir W. Foster and Dr. Glover. With Sir W. Foster I had some years ago a correspondence on this subject, and I found his attitude weak. He deplored the lack of union in our ranks which made the matter almost hopeless. Dr. Glover's attitude I do not know, but Sir Dyce Duckworth spoke out strongly enough and ultimately he will voice our will, for he told us that the General Medical Council did not raise the standard of medical education in order that this sort of thing should be supported. There is only one practicable solution of this problem. Recognising the needs of the poor we treat a certain section of the public on nominal terms. We, then, not the philanthropic layman who wishes to unite with the poor in this matter, must be the judges of who shall have medical attendance in this way. There is the crux. The clubs say, "We shall dictate the terms and scope of your club-work." The answer is easy enough, "You shall not, we will make our own arrangements." That has been, and I hope will always be, my attitude. I have not seen the liberal support of hospitals which "C. W." notes. I believe in Birmingham and some other towns large sums are contributed in this way, and I fear the provident element is invading to some extent our medical charities. The outcome of this feeling is shown in the late co-operative attempt in that city. If "C. W." would care to see them, I should be glad to send him privately instances of the weak points and abuses of the institutions he champions.

I am, Sirs, yours faithfully,

Loughborough, Dec. 16th, 1901. J. B. PIKE.

## THE FREQUENCY OF TRICHINOSIS IN THE UNITED STATES.

GERMANY has always been regarded as the only country in which trichinosis is especially rife, and this is of course due to the habit of a large number of its people of eating pork in an uncooked state. The United States is the land of the hog, but despite this fact the belief has been current that trichinosis is a disease comparatively rare among its inhabitants. A systematic examination of pork made for commercial reasons in the United States has shown the frequency of trichinosis in hogs to be about 2 per cent. Dr. Herbert A. Williams, professor of pathology, medical department, University of Buffalo, was struck by the apparent lack of any such systematic researches upon the frequency of trichinosis in human subjects, either in America or in Europe, and for the space of several years he has been closely investigating the matter, the results of which investigations he has published in the *Boston Journal of Medical Research*. Dr. Williams began his studies in 1894, and from that date up to this year 505 cadavers have been examined, trichinæ being found present in 27 or 5·34 per cent. Of these the United States white population contributed 2·89 per cent.; United States coloured, 7·14; British and Irish, 8·06; Canadian, 16·6; German, 12·24; and Italian, 16·66 per cent. Dr. Williams summarises the result of his investigations as follows: 1. Samples of muscles secured at 505 unselected necropsies on adult human subjects were examined microscopically for trichinæ. In 27 cases, or 5·34 per cent., trichinæ were present. 2. All of the subjects died from other diseases than trichinosis. The infection with trichinæ must in every case have occurred a considerable time previously. 3. The infections were of various degrees of severity, being sometimes very extensive and sometimes so slight that only one or two worms were detected. 4. The birthplaces of the subjects included the most important countries of North America and Europe. The number of cases was not large enough to allow accurate conclusions to be formed as to the influence of nationality upon the frequency of the disease. The fact that a large proportion of cases occurred in persons who were born and had lived in the United States is important. 5. An unusually high percentage of cases occurred among persons who had been insane. 6. Examinations of sections from the above cases for eosinophilic cells failed to show such cells about or near the encapsulated trichinæ. 7. Mast cells do not collect in or about the capsules in cases of old trichinosis. 8. Plasma cells occasionally appear in or about the capsules. 9. Newly-formed elastic fibres sometimes appear about the capsules. 10. As described by Leuckart and Langerhans the capsules may be invaded by new cells, the worms disintegrate, and thus the capsules become filled with fibrous and adipose tissue. The investigations of Dr. Williams have brought out some extremely interesting and instructive points, the chief of which are these, that trichinosis is much more prevalent than is commonly believed in the United States, and especially is this true as regards the white population. Dr. Williams gives a probable and plausible explanation of this occurrence as being due to the custom of many American farmers of eating uncooked or partially cooked pork. The other point to which attention may be drawn is the prevalence of trichinosis among the insane, which may perhaps be attributed to the careless mode of feeding practised by persons thus afflicted before they are placed under restraint. The outcome of Dr. Williams's researches emphasises the need of careful microscopic examination of pork before it is exported, and the necessity of the meat being thoroughly cooked before it is used as food if the troublesome parasite is to be effectually kept out of the human body.

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*Obstetrician* is certainly entitled to a fee if he was unconditionally engaged to attend the case. But if he was engaged only in the event of the absence of the first medical man, and the contingency did not arise (the first medical man being available), we do not think that he can claim a fee. Probably no definite arrangement was come to, the patient's husband believing the condition to be understood and our correspondent believing that there was no condition whatever attached to his engagement. If this is the case, would it not be better that a common friend should be invited to arbitrate? There can be no hard-and-fast professional rule that will provide for the results of a misunderstanding.

*Rostrum.*—A thing may be true and yet not worth saying. We advise our correspondent not to take the course that he proposes. If he think that a private remonstrance would be misunderstood it would be better to get someone else to put the right view before the offender.

*Oakdene.*—The greater part of our correspondent's speculations are

only possible to one devoid of anatomical and physiological knowledge. In one or two points he has guessed right, and these points he will find in every text-book of medicine.

*Fairplay.*—Only a combination among medical men can successfully deal with a medical aid society. Fairplay, we presume, knows the strength of his position and whether it will justify him and his colleague in sticking to their guns.

*Bat.*—In the circumstances narrated by our correspondent we think that 10 or 15 guineas would be a reasonable charge for each operation, taking into consideration the pecuniary position of the father.

*A late Public Vaccinator.*—We are in sympathy with much of our correspondent's letter, but we doubt if it would serve any practical purpose to reprint it.

*Furnace.*—The address is Gravel-lane, Southwark-street, S.E. Our correspondent should consult THE LANCET, Nov. 30th, 1901.

*Anonymous.*—We have forwarded the postal orders to the William Smyth Fund.

*K. G.* has acted in the proper spirit.

**During the week marked copies of the following newspapers have been received:**—*Macclesfield Times, Macclesfield Courier and Herald, Yorkshire Post, Reading Mercury, Mining Journal, Local Government Chronicle, Hertfordshire Mercury, Dorset County Chronicle, City Press, Norfolk Standard, Halifax Evening Courier, Alliance News, Lincoln Echo, Sydney Daily Telegraph, South Wales Press, Perth Journal, Liverpool Courier, Surrey Advertiser, Local Government Journal, Courrier de la Presse (Paris), Le Journal des Débats, Le Progrès Médical, Le Voltaire, La Politique Coloniale, (Paris), Herts Observer, Stafford Advertiser, Durham Advertiser, Preston Herald, Hereford Times, Hull News, Liverpool Daily Post, Southern Echo, Dunfermline Journal, Plymouth News, East Anglian Times, Sussex News, Leeds Mercury, Worcester Chronicle, Walsall Observer, Swansea Herald, Dundalk Examiner, Birmingham News, Blyth News, Auto-motor Journal, Eastbourne Chronicle, &c.*

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, Dec. 19th, 1901.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Rainfall. | Solar Radia in Vacuo. | Maximum Temp. Shade. | Min Temp | Wet Bulb. | Dry Bulb. | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Dec. 13 | 28·85 | E. | 0·73 | 52 | 45 | 40 | 44 | 45 | Raining |
| ,, 14 | 29·25 | N.E. | 0·21 | 49 | 44 | 42 | 41 | 43 | Cloudy |
| ,, 15 | 29·70 | N. | ... | 53 | 38 | 35 | 32 | 36 | Fine |
| ,, 16 | 29·54 | S.E. | ... | 49 | 41 | 35 | 35 | 37 | Overcast |
| ,, 17 | 29·81 | W. | ... | 47 | 43 | 31 | 30 | 32 | Foggy |
| ,, 18 | 29·32 | W. | 0·07 | 57 | 43 | 32 | 34 | 35 | Cloudy |
| ,, 19 | 29·39 | W. | ... | 46 | 38 | 32 | 32 | 33 | Foggy |

# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY (23rd).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

**TUESDAY (24th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**WEDNESDAY (25th).**—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

**THURSDAY (26th).**—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**FRIDAY (27th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY (28th).**—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.)

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

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*Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

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*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

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